THE FORMULATION OF AN ADMINISTRATIVE STRUCTURE FOR THE MANAGEMENT OF FALSE BAY

by

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ABSTRACT

A study of the administrative mechanisms for planning and controlling False Bay, a complex marine and coastal system, provides insight into the problems that beset South African resource management in general and coastal zone management in particular.

Problems of management result from the unco-ordinated approach to the planning of development and the diffused control of resource utilization. The situation is unlikely to be improved through the imposition of various ad hoc restrictions on developments and exploitation rates alone. As with the whole of the South African coastal zone, a comprehensive co-ordinated management effort is needed, with boundaries, exploitation rates and development limitations based strictly on recognised ecological principles.

This paper examines the options that exist for the formulation of an administrative structure for the management of False Bay and suggests that a co-ordinated management effort will contribute greatly towards the attainment of the maximum sustainable utilization of all its natural resources, to the best advantage of the greater society.

FOR MY MOTHER AND FATHER

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PREFACE

This subject has been chosen as a thesis topic for three reasons. Firstly, it is an attempt to satisfy, in part, the dirth of knowledge and lack of interest in the field of coastal zone management in South Africa. It is hoped that at least parts of this work may be used in the promotion of rational utilization of coastal resources and that the selected area may be a worthwhile touchstone for administrative options.

Secondly, the emphasis is largely on the administrative workings involved in management as this, apart from being the area of specialisation of the author, is an oft neglected aspect of environmental science and conservation.

The third reason is to be found in the particular personal interest and involvement of the author in the conservation of a unique and vital facet of life in the Cape.

The nature of the topic has precluded persistant reference to similar situations elsewhere around the globe. Although practices in New Zealand, the United Kingdom, France and the United States of America have been noted, it is felt that with the vast differences in the political, social and economic institutions of these societies, extrapolations may not only be difficult, but also meaningless.

Every attempt has been made to investigate not only administrative but also ecological and anthropological theories and principles pertinent to the case in point without losing sight of the actual situation or taking the subject out of context.

The scope of this paper is closely defined. It merely identifies the possible agencies that could be made

responsible for the management of False Bay. It is not providing a blueprint for the planning of resource utilization nor a management plan itself. These are different and greater tasks - not one which could be adequately achieved by one person alone.

Much of the background to this paper can be found in the proceedings of the symposium on the Future Management of False Bay held in June, 1980, under the auspices of the False Bay Conservation Society. Evidence of the need for the establishment of an agency to fulfill the role as a management body for this area can be found in the fact that no existing authority has seen fit to take up the reins where the symposium left off.

My sincerest thanks are extended to a multitude of people who have helped with this study. Firstly, I am indebted to my supervisor, Professor Richard Fuggle, of the School of Environmental Studies, UCT, for the assistance and guidance he afforded me in this undertaking. I am further grateful to the Human Sciences Research Council for their financial support of this study and to the Department of Environment Affairs for making the time and logistic support available to me.

I was fortunate to have been aided, by way of interviews and sound advice, by many people from a broad spectrum of spheres of interest. The spirit in which my questions were received - and my knowledge enhanced - was most gratifying. I would like to express my thanks to the following:

My work colleagues Mr. Dries Visser, Mr. Ernst Huisamen and Ms Sue Rip of the Environmental Conservation Branch of the Department of Environment Affairs;

Mr. Bertie van Zyl from the Cape Metropolitan Planning Committee;

The staff of the Urban Design Unit, Municipality of Cape Town;

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And all the other people from private organisations, local authorities, provincial and state bodies who afforded me interviews and sound advice.

My special thanks go to Ms. Trudie Koegelenberg and Ms. Denise Pinkham for their proficient typing of this paper, and my wife, Sue, for all her encouragement and support.

CHAPTER 1

INTRODUCTION

1.1 AIM, OBJECTIVES AND METHODOLOGY

The aim of this paper is to formulate an administrative mechanism by which False Bay and its catchment area may be managed. The present management effort is frustrated by a number of problems - a lack of holistic perspective in resource planning and a multiplicity of authorities being the two principal obstacles.

Seven objectives need to be achieved before this aim may be realised. Each objective is covered in a separate chapter. These objectives are:

1. To clarify the terms used in the title of this paper. The practices of "administration" and "management" are discussed and the geographical scope of the subject area is defined. Ecological parameters are adopted for boundary definitions.

2. To briefly review the concept of integrated resource management. The attainment of this ideal is adopted as the raison d'être for any such management objective.

3. To outline the historical, physical and social context of False Bay and its catchment. This chapter is a synthesis of existing information on the subject area and includes findings from extensive literature surveys, personal observations and interviews with concerned individuals and representatives of involved agencies.

4. To analyse the current control structure and planning procedure applied in False Bay and its catchment. This

analysis is largely original work resulting from a detailed study of the relevant legislations, administrative structures and planning agencies. A comprehensive tabulation of the bulk of the legislation affecting False Bay and other coastal zone regions appears in the paper to emphasise the multiplicity of functions and authorities involved in the management of the area.

Based on frank responses during interviews with people involved in the control and planning functions, a summary of perceived problems of both the planning and control mechanisms provides the basis for the investigation into an alternative management system.

5. To identify the changes needed to promote the integrated management of the area. Necessary modifications are divided into two categories. These categories are defined and are used in the following two chapters as bases for determining, in practice, how these changes could be implemented.

6. To outline options for a modified administrative structure for the management of the area. In this chapter existing and proposed administrative options are briefly reviewed. The relative advantages and disadvantages of each option are noted. Although some cognisance has been taken of the international trends towards coastal zone management, the options advanced in this chapter relate specifically to the South African political, constitutional and social context.

7. To outline non-structural changes that may assist in the attainment of the management objective. These considerations reflect on administrative components such as finance, staffing and worker motivation.

Many, if not all, of these components may be improved upon irrespective of the outcome of the attempts to modify the structure of the management authorities in this area.

In the penultimate chapter recommendations for modification of the present management arrangement are made. These have deliberately been divided into short term and long term modifications. This distinction is justified by the recognition of the need for the urgent redress of certain deficiencies without the inevitable delay that would be experienced if a long term integrated national approach were to be adopted from the outset. The conclusion follows.

The information contained in this paper has been extracted from a variety of sources, both written and unwritten.

The contextual information was obtained from a wealth of published references on both the topics of administration and False Bay. The chapter on resource management is based on reviewed literature, but comprises largely the author's personal impressions on the subject.

In Chapters 4 and 5 that deal with current and proposed administrative arrangements, the author has relied upon interviews with people involved in planning and management, original legislation references and personal observations. Much of the information relating to the options of an administrative structure emanates from speculative unpublished papers and opinions of office-bearers at local, regional, provincial and national levels. The literature on the planning and control institutions of other countries such as the United States, France, New Zealand and Australia has been referred to, but not used to extrapolate options for management.

Table 1.1 provides a list of persons interviewed during research for this paper.

1.2 A CLARIFICATION OF THE TITLE

The apparent clarity of meaning of the terms used in the title of this paper might tempt one to evade a detailed definition of these words. This would be an unwise omission. Certain basic interpretations must be made and critical reference points clarified if the concommitant proposals are to be fully appreciated.

1.2.1 Administration and Management

Andrew Dunsire, in his leading work on the meaning and science of administration, gives some 15 definitions of the word administration.[1] These meanings range from mere "help" or "service" to the function of "analysing, balancing and presenting for decision complex policy considerations". Many other works have been dedicated to this ubject, but the pursuit of a perfect definition is of little consequence here. For the present purpose, an administrative structure can be defined as a body of persons, empowered by both law and physical facilities, charged with the responsibility of a certain task.

The body of persons may be large or small, either voluntarily or officially constituted. Such a body may be established and recognised in terms of some law, be it a statute, ordinance or by-law. This enabling legislation would determine its constitution, terms of reference, powers and procedural practices. Together with this legal capacity such a body must be vested with the necessary

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1. Dunsire, A.: Administration; The Word and the Science, p.228.

physical facilities to perform its task. These facilities include financial, technical, organisational, professional and logistic elements of the administration. Another important aspect is the interaction between such a body and other bodies and society at large.

Although administrative mechanisms generally develop in an autochthonous fashion, responding to the environment in which they exist, sometimes a change in social or physical circumstances is not accompanied by a commensurate change in the system. It is my genuine conviction that the present administrative status quo as it relates to planning and control in False Bay cannot cope with the rapid changes that are taking place. It is for this reason that various options of administrative structures will be debated in Chapter 5.

Management is perhaps as elusive a term to define as is democracy or freedom. In essence it remains a value judgment; for what may be deemed as solicitous management by one may be regarded as abusive mismanagement by another. It is the quality of management that poses the problem. Functionally management also has a multitude of interpretations, but may be simply defined as comprising two phases:

> Firstly, a planning phase. This is the development of a policy or strategy. In its simplest form, a policy can arise from the adoption of a goal or purpose and the identification of objectives that must be achieved to attain that goal.
>
> Secondly, an implementation phase. This is simply the "putting into practice" of the policy, or working towards the goal.

Further to this there is a sine qua non which, if overlooked, poses grave problems to management. Management is not possible without control. Control implies authority or legalised power. Agencies with delegated tasks of managing an operation cannot perform efficiently without the authority to effect action. This in no way implies that responsibility must be delegated with authority. This may well take place, but ultimate responsibility rests in the hands of the delegating body. Examples of the failure to recognise this elementary principle of administrative theory will be cited in the pages to follow.

By extending the concept of management further, one rapidly enters the domain of value judgments. In the first instance a fundamental objective of management is, or should be, the recognition of the societal good. Secondly, but closely linked in management of natural resources, is recognition of the principle of maximum sustainable yield. The determination of a maximum sustainable yield requires two basic steps:

1. An assessment of all the stocks of resources and their rates of regeneration;

2. Determination of the rates and patterns of exploitation that would offer maximum harvest without causing risk to the natural regeneration of sustained stock populations over a long time period, taking into account natural peturbations.

Nevertheless, even if it could be perfectly applied, a maximum sustainable yield would not always provide the best management option. Other factors interact to establish a more complex task. For example, the manager may be asked to determine not only the sustainable yield but also the suitable utilization of resources - a value judgment.

It is at this stage that various interests may clash due to varying ideas of what may or may not be regarded as suitable. The pelagic fishing industry may claim that their fish extraction from the Bay is both sustainable and suitable while the line fisherman or rock-angler may have different sentiments. Kaolin mining may be viewed as perfectly in keeping with the area considering its mineral potential, while the tourist industry may regard mining as defacement of the valuable asset on which their livelihoods depend.

This illustrates the true nature of management - the control of the allocation of resources for different forms of utilization. Preservation forms an integral part of such management. It is one option for utilization. Conservation is more than this. It is an all-embracing form of management that ensures, through wise utilization, that the resources can be sustained, despite the pressures of conflicting values.

Why, then, is the ideal of perfect management so difficult to attain? What factors other than differences in people's persuasions complicate the issue?

Christopher Hood has provided many of the reasons in his comprehensive study on the Limits of Administrations.[2] He lists the main restrictions to perfect administration in four groups, namely:

1. Economic limits.
2. Quasi-administrative limits.
3. Social Structure and Contingent limits.
4. Administrative limits.

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2. Hood, C.: The Limits of Administration, p.192.

The first is dependent on policy priorities which will differ from situation to situation and from time to time. Simply stated, it recognises the "sharp limits to the amount of men and money which can be devoted to administration".[3]

The quasi-administrative limits include those restrictions on an administration purposefully created by political decision in order to achieve a political end. These limits may be internally (from within the civil service) or externally created (from society in general).

The limitations imposed by the social structure and its contingents are complex. These include the interaction between the public and public servants and social dynamics within the public service.

The final and most readily recognisable limits are those imposed by the administration itself upon itself. These include dysfunctions in co-ordination and multi-organisational performance, problems of control, limited time and organisational structure.

In the field of resource management the formulation of a comprehensive and practical strategy is an essential prerequisite for political and administrative action. Such an approach could be adopted by any administrative structure at virtually any level of government. Whatever administrative structure is adopted for the management of False Bay, the principles of holistic resource use planning should be employed. It is for this reason that certain limits to administration are discussed further and that the workings of an holistic approach to resource management or "ecomanagement" are explored in some detail in Chapter 2.

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3. Hood, C.: Ibid., p.193.

1.2.2 False Bay - The Geographical Limits

The definition of the geographical area of False Bay is the final element in clarifying the title of this paper.

False Bay means different things to different people. To the politician it is an electoral constituency centred east of the water body, to the Fisheries Officer it is the sea, to the local authority it is a rigidly defined sphere of influence, while to the Navy it means Simonstown or Swartklip. To the tourist False Bay is an integrated marine and coastal environment characterised by the vast expanse of water, its impressive mountain range; an area blessed with natural beauty and rich in its colourful social fabric.

It is this final holistic perspective that needs to be adopted as a definition of the area by planner and manager alike. There is an urgent need, when managing such a wealth of complex and interrelated natural and social components, to discard the traditional political, legal and administrative boundaries; to cast aside parochial concerns and adopt the broader region determined by the physical parameters that determine the very nature of the area.

What, then, is the extent of this geographical area? Broadly speaking, there are three major components within its confines. These are the terrestrial component, the marine component and the interface between the two. Management will and does extend over all three components. The difficulty rests in defining an absolute boundary for each of these components, for all government must have a clearly defined scope or sphere of influence.

If one is to utilize ecological parameters or physical influences in defining management boundaries, the selection of determining factors becomes the critical issue. On

the seaward extremity many such factors are evident. Tides and currents play a critical role in regulating the distribution and productivity of the marine flora and fauna. The water movement in the Bay is subject to the strict seasonal patterns of South-Easterly induced upwelling and the introduction of warm Aghullas current waters in the summer. Its meteorological characteristics, too, have a profound influence on activities performed in the Bay. However, these natural functions can, as yet, not be altered by man's actions and in this particular case are of little use in the definition of the boundaries. Other than for the control of oil pollution and pelagic fishing, there is limited justification in extending the seaward boundary of False Bay beyond the most obvious land-induced perimeter - namely that of the imaginary line that runs between the two land promonotories of Cape Point in the West and Cape Hangklip in the East. Apart from the two cases cited, the regulation of man's activities within the confines of the Bay is of cardinal interest to the management imperative.

On the landward extremity there exist again a number of ecological considerations that directly or indirectly influence the functioning of the system and the activities that take place in or around it. Unlike tides and currents, rivers have been subjected to enormous manipulations. Because of its vital role as a source of life, water must be wisely managed and judiciously used. At every stage in its path from the highlands to the sea, water is vulnerable to abuse. The catchment areas which are the source of rivers and streams are oftren modified by the destruction of vegetation or the alteration of courses, thus affecting the rate of run-off and disrupting the normal flow. Anything more than a trickle is used either as a supply of water for industry, services, agriculture, or households or as a carrier of man's wastes to the sea. At the end of the gauntlet run by the rivers and streams,

lie the estuaries - perhaps the most sensitive water-associated systems on earth. All told there are some sixteen rivers and streams that run into the Bay, with a number of permanent vleis on the Cape Flats including Zeekoevlei, Rondevlei, Sandvlei, Princessvlei, Little Princessvlei and Langvlei.* The Cape Flats Aquifer provides the final link in the fresh water web of the False Bay basin.

Optimal water management can only be achieved if sound watercatchment practices are employed. For this reason the terrestrial extremity of the False Bay region should be defined by its catchment area. The mountains that provide the distinct watershed and the rivers are indicated in Figure 1.1 on page 128.

The third major component is the interface between the marine and terrestrial systems. This includes both the intertidal zone and shore zone that are subject to the greatest human pressures in an area such as False Bay. This paper does not explore the subject of management zones further, but the five broad management zones adopted by Barry Gasson in his paper on the False Bay Metropolitan perspective[4] appear in Figure 1.2 on page 12.

> Zone One: The sea includes the total marine environment between High Water Mark and the imaginary line drawn between Cape Point and Cape Hangklip.
>
> Zone Two: The interface, includes the three zones[4] Gasson refers to as the nearshore, the foreshore and the backshore.

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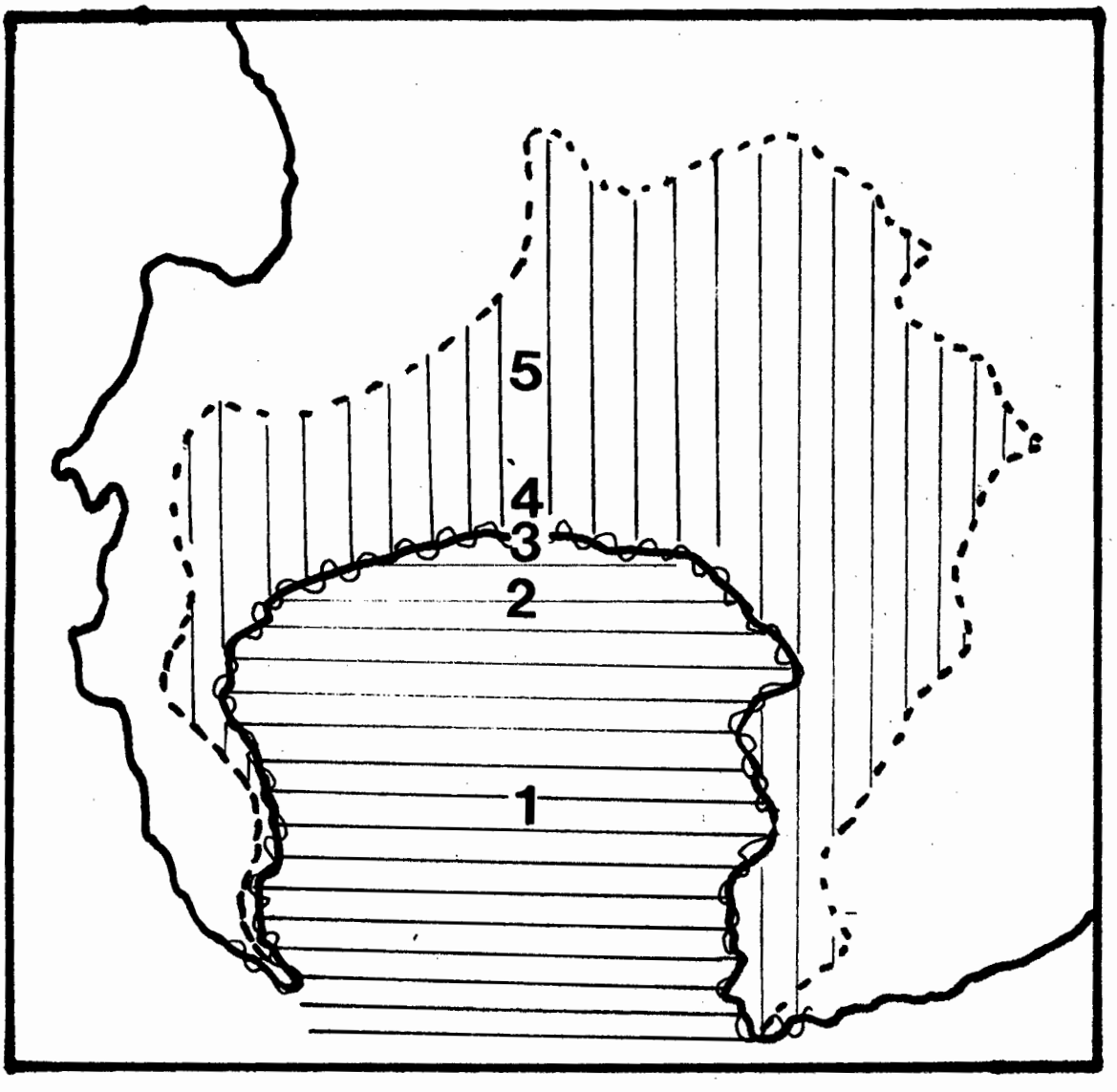
4. Gasson, B.: False Bay in Metropolitan Perspective: The Management Imperative, Proceedings of the seminar on the Future of Management in False Bay, June 1980, p.9.

* The Paardevlei and Kuils River wetland areas are also important wetlands

KEY

1	≡	The Bay Proper
2	≈	Nearshore
3	≈	Foreshore
4	≈	Backshore
5	|||	Hinterland



Source: Gasson, B., 1980

FIGURE 1.2 Broad Management Zones

Zone Three: The hinterland, includes all the land and aquatic elements between the backshore and the watershed.

The False Bay system, includes all of the three zones defined on page 12.

The Western region referred to in the text is the terrestrial area between Cape Point and Muizenberg. The Eastern region lies between the Strand and Cape Hangklip, whereas the Northern region falls in between these two. These reference points are indicated in Figure 1.1, on page 128.

The adoption of such a functional boundary would have far-reaching effects and would either demand the overlaying of yet another grid of boundaries onto the already complex set, or the abolition of one or more of the existing sets of boundaries and their substitution by one determined by the abovementioned parameters. Figure 1.3 indicates the full extent of the area's margin, which includes the hinterland towns and suburbs of Pinelands, Goodwood, Parow, Bellville, Kuils River, Stellenbosch and Somerset West.

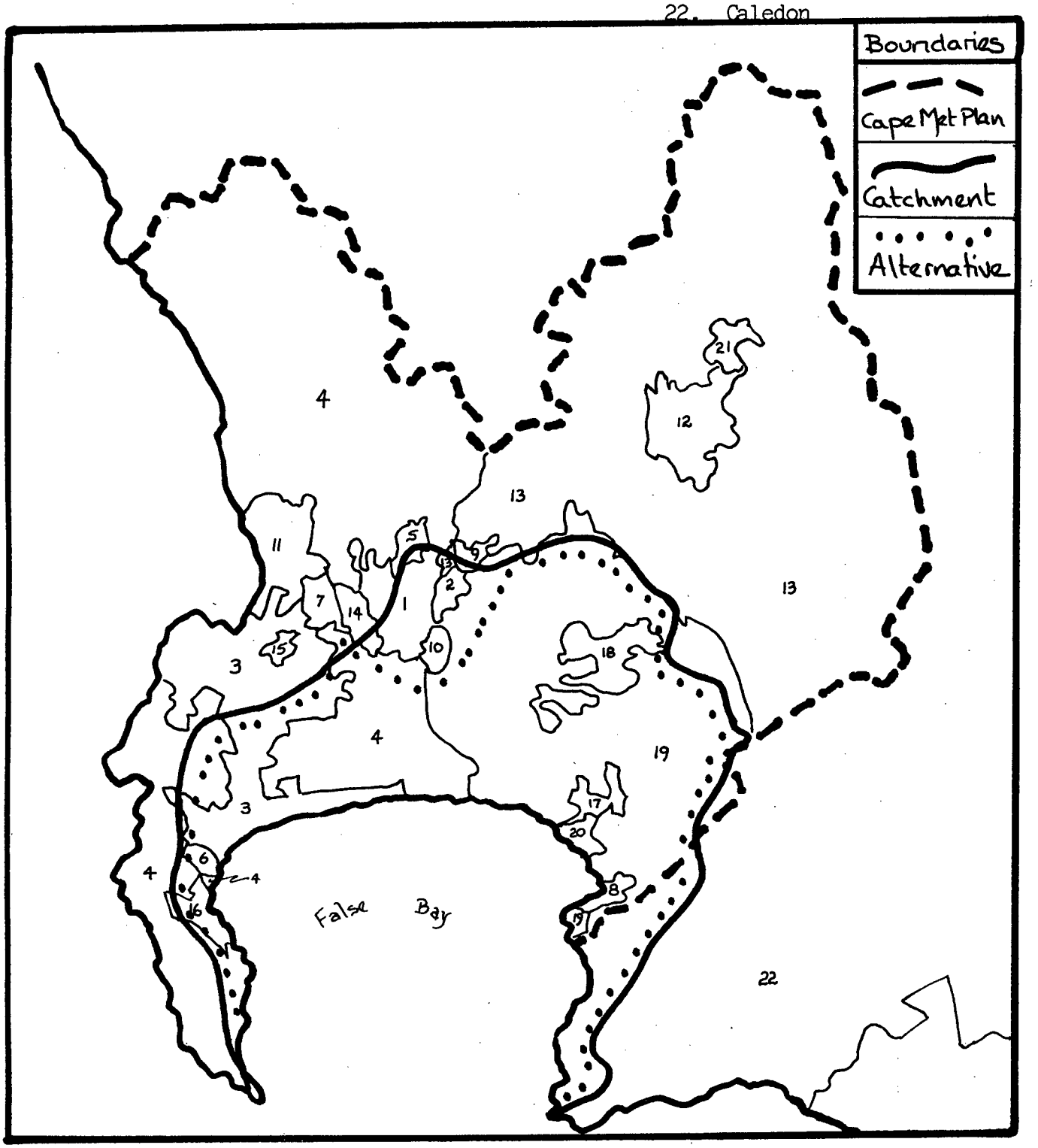
If such an extended boundary were to be unacceptable because of the incorporation of these inland areas, a compromise could be made by adopting the southern perimeter of the administrative borders of all of the above, except for Stellenbosch and Somerset West. This alternative is also indicated in Figure 1.3 on page 14 by a dotted line.

It is the sincere belief of the author that the adoption of such a boundary will ultimately make a major contribution towards sound resource management.

The following chapter explores the concept of integrated resource management further.

KEY

1. Bellville
2. Brackenfell
3. Cape Town CC
4. Cape DC
5. Durbanville
6. Fish Hoek
7. Goodwood
8. Gordons Bay
9. Kraaifontein
10. Kuils River
11. Milnerton
12. Paarl
13. Paarl DC
14. Parow
15. Pinelands
16. Simonstown
17. Somerset West
18. Stellenbosch
19. Stellebosch DC
20. Strand
21. Wellington
22. Caledon



Source: Cape Metropolitan Area Draft Guide Plan, 1971.

FIGURE 1.3 Boundaries

CHAPTER 2

INTEGRATED RESOURCE MANAGEMENT

2.1 PRESENT LIMITATIONS

Most public administrations have a hierarchical structure and a traditional function. These cause problems in integrated resource management. The structure seldom possesses the flexibility required for the optimum allocation of public resources to rapidly evolving situations. Max Weber's typical bureaucratic structure for administrations and organizations is by no means defunct. This structure has played and still is playing an important role in the institutionalization of professional loyalties and reinforced sectionalism. It promotes career patterns in the public service which hampers functional integration. This integration of related but unattached departments and agencies is a vital element in effective ecomanagement.

The second limitation is operational inflexibility. With the accelerating tempo of change in the modern world, new technologies and social pressures provide an increasing strain on the adaptive capabilities of governmental organizations and administrations - traditionally slow moving and conservative organs.

Many of the current environmental problems are unprecedented in human history - resulting from social mobility and rampant technological advances. Traditional bureaucracy needs to be replaced by what Alvin Toffler[1] calls an "adhocracy" - an administrative system capable of reassigning outdated priorities and reallocating misguided public funds.

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1. Toffler, A.: Future Shock, p.126.

In Toffler's words, "traditional functional organization structures, created to meet predictable, non-novel conditions, prove incapable of responding effectively to radical changes in the environment".[2]

In short, the organizational forms in administrative structures, just as in architectural structures, must move from "long enduring to temporary forms, from permanence to adaptability".[3]

The change from bureaucracy to ad-hocracy has become a necessary condition for the responsiveness of government to meet the challenge of modern society.

The third and final limitation to current organizational functions is their frequent inability to enlist and evaluate science and technology. The environmental problems facing us today are largely, directly or indirectly, a result of applied technological and scientific knowledge. In our modern society, the solutions of such problems are generally found in a recourse to science.

The wise utilization of available technological expertise for the prevention, limitation and alleviation of environmental degradation is an oft neglected facet of administrative responsibility.

The exclusion of strategies that have been proved either impractical or inadequate in the past, may provide another useful step towards a suitable integrated approach to ecomanagement.

Three strategies for resource management will now be examined:

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2. Toffler, A.: Ibid., p.126.
3. Toffler, A.: Ibid., p.127.

2.2 A TECHNOLOGICAL APPROACH

Broadly speaking, the technological approach to resource management was the initial manifestation of man's realization of the environmental impact of his actions. Closely connected with man's assumption of dominion over the earth, was his commitment to technology as a vehicle for domination. This commitment has brought both miracles and menaces into our lives and has been the mainstay for the rectification of our problems. We turn to the same people who create certain problems to rectify them. Responsibility thus remained in the hands of the scientist to rebalance the upsets, recreate the depleted and remould the eroded.

The major limitation of this approach is its disregard for both human values and ecological vulnerability. With economic growth, technological advancement has assumed the principal role, as innovator and controller, in our modern society. The costs of this advancement are generally paid in ecological and sociological currencies.

The deficiency of this strategy led most nations towards another; the ecological approach. The outrage of the early sixties vocalized a new concern for our earth and heralded a new mode for solving its problems - the age of ecology had dawned.

2.3 THE ECOLOGICAL APPROACH

This approach called for the end of overconsumption, proposed a check on unbridled economic growth and advocated a symbiotic relationship between man and nature. It has one inherent failing. This new strategy required the sacrifice of hard-earned and jealously guarded commodities.

It demanded the surrender of luxuries and excesses in the living standards of the upper and middle class citizens of advanced western states.

The ecological approach had, in its initial stages, overlooked man's selfishness and basic disregard for the future. The problem lay in the axiom: whereas growth is not always in the interest of the generations to come - conservation of limited resources is not always in the interest of our present generation.

2.4 AN INTEGRATED APPROACH

In his work on Enviornmental Policy and Administration,[4] Henning suggests that the best possible approach to resource management would be interdisciplinary. This paper takes this concept further and Figure 2.1 on page 19 provides an outline for such a multidisciplinary approach.

The advantages of the strategy are threefold:

Firstly, it provides a vehicle for solving complex problems which require a variety of specialized inputs. Many problems, particularly when broad policy issues are involved, are too complex for a single discipline. Co-operation between, and the combination of expertise from, various related disciplines is frequently essential.

Secondly, traditional organizational structures and barriers are broken down. This promotes the cross-fertilization of ideas. Intransigence of opinions is tempered by the awareness of the implications of individual actions on other facets of the problem.

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4. Henning, : Environmental Policy and Administration, p.149.

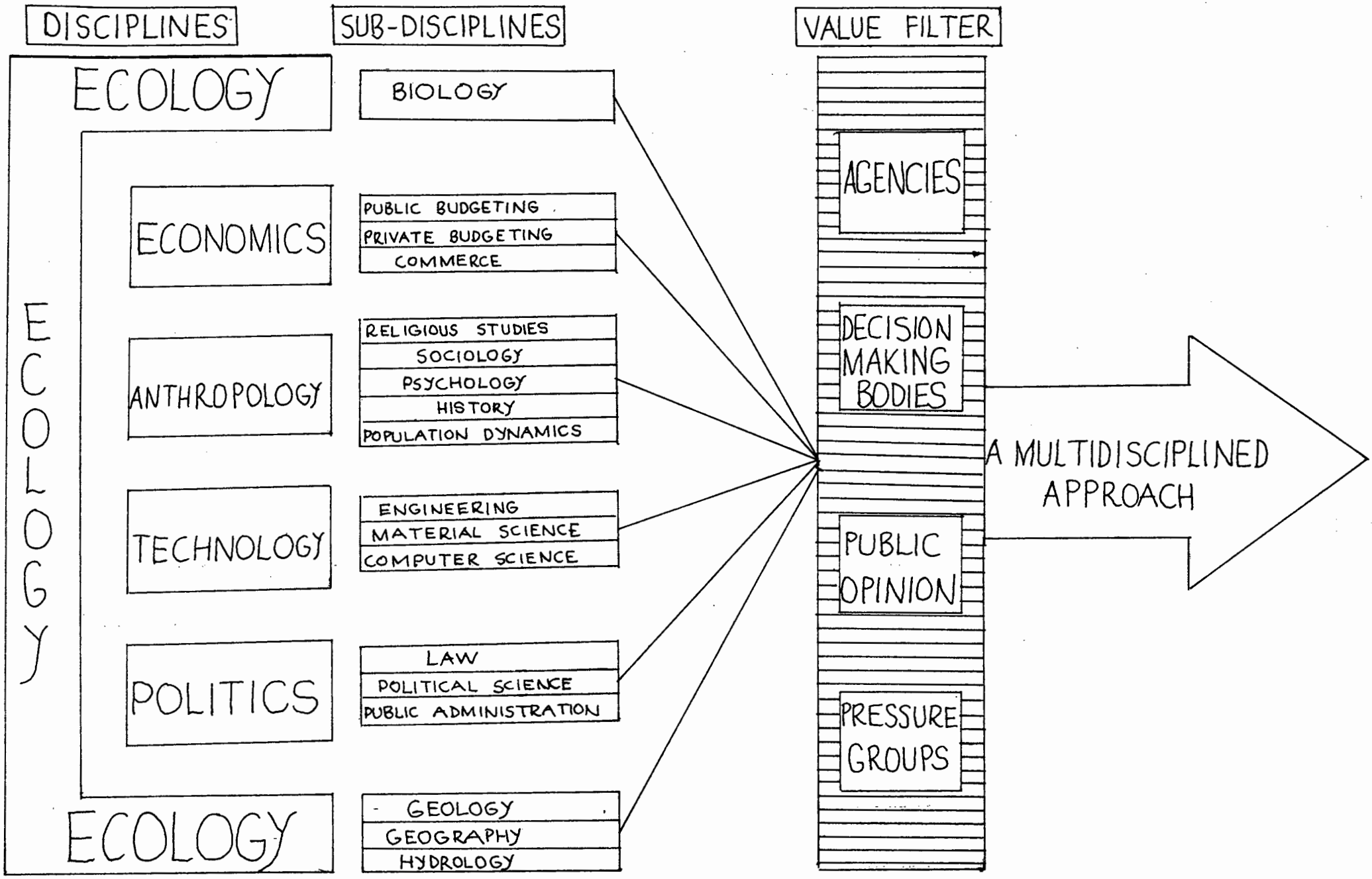

FIGURE 2.1 Multidisciplinary Management

Thirdly, a multi-disciplinary approach makes provision for the synthesis of micro and macro perceptual observations. Here the specialist can be guided by the generalist and the microperceptual viewpoint put into perspective, within the macro concept of ecomanagement.

From Figure 2.1 it may be noted that the four disciplines of Economics, Anthropology, Technology and Politics are enveloped in the overriding discipline of Ecology. This diagrammatically emphasises the primary position ecological considerations must hold.

The sub-disciplines of Ecology include Biology, Geology, Geography and Hydrology. Recommendations from experts in these fields must be viewed together to provide an examination of various levels of life. In this ecosystem concept, man is considered to belong to the consumer component in the trophic (feeding) levels. This place is unique and is often referred to as that of the manipulator.

These ecological sub-disciplines can be of greatest use in determining the maximum sustainable utilization that man can safely afford to practise in any given ecosphere. This limit must provide the framework in which all the other factors take part.

As the ecosystem results from the integration of all living and non-living elements, other fields of study such as the humanities must receive the attention they deserve. These are sketched in the diagram in Figure 2.1.

In general terms, economics deals with the supply and demand of natural and artificial resources. It is in many respects the central element in the four disciplines, as it determines resource allocation. Although subject to value judgments, fiscal policies play an important role in the determination of utilization of all resources and

financial effort.

The discipline of Anthropology deals with the cultural factors. The sub-disciplines here encompass most facets of man's unregulated behaviour including his religious convictions, psychological state and social values.

Every thorough administrative programme must take cognisance of institutional idiosyncracies, as far as possible, to ensure maximum acceptability of programmes by the general populus.

The technological aspect has been covered above, but in today's world, no policy of such complexity could be drafted without consideration of the limitations and repercussions of technological aids. Computer science has contributed greatly to the analysis of ecosystem components and can, in its advanced state, assist man in most, if not all, fields of management.

The study of politics, man's organs of control over himself, provides the final element in the multidisciplinary strategy. Legislative enactments can be used to limit exploitation or promote consideration. Application of public administration principles can assist in the regulation and control of the actions of states, agencies, departments, private enterprises and individuals alike. Knowledge of these variables helps to establish the tolerable parameters of human conduct.

The input of data and opinions undergoes a process of "value filtering". Here, in a series of stages, recommendations are sifted through established mechanisms that determine the validity and acceptability of the proposals. The Agency or department responsible for the development of a policy would make the first series of judgments on the available data, assigning priorities to one or the other

disciplines. The formulated plan would then pass through a second stage, a public decision-making body. During this stage other factors may come into play: pressure groups may intervene and public opinion may sway the final decision.

Feedback from any one of these elements may necessitate a re-assessment by the original agency and the submission of further data and proposals from one or more of the disciplines involved.

It is in this final stage that the greatest care must be taken, as environmental problems quickly become value judgments subject to the enigmas of making social choices. Technical analyses flounder on biases that do not represent general will, as values are inherent in theories and methods. Similarly political analyses often fail.

It appears that in the final analysis, politics and government will determine environmental survival and quality. Henning, in a note of despondency, concedes that "when serious decisions are to be made through the political and administrative processes old values and vested interests of agencies and clientele groups usually assume paramount importance".[5] Yet, the presentation of a comprehensive and empirically reliable set of proposals to a legislative body, will drastically reduce misinformed and partisan social decision-making. Transgressions of principles forwarded by the various disciplines will be guarded against and if necessary, collective action will be taken by the corporate body responsible for drafting policy recommendations.

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5. Henning: Environmental Policy and Administration, p.51.

It is this new and exciting concept of integrated resource management that Prof. J. Hanks, in his inaugural lecture as Professor of Biological Sciences at the University of Natal described as "a discipline which investigates the optimum development and use of natural resources for the maximum benefit of the population".[6]

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6. Hanks, J.: Ecosystem Development - A New Environmental Order, p.1.

CHAPTER 3

THE HISTORICAL, PHYSICAL AND SOCIAL CONTEXT OF FALSE BAY

3.1 AN HISTORICAL PERSPECTIVE OF FALSE BAY'S ADMINISTRATIVE PROBLEMS

The first recorded sighting of the Cape of Good Hope was the brief encounter of Bartholomew Dias in 1488. (It was called Golfo Dentro das Serras - the Gulf within the mountain ranges). The earliest description of its importance as a beacon for the rounding of Africa is cited in the writings of Vasco da Gama in 1497, who noted that the occasion thrilled his men who had "sailed along the coast with much pleasure, merrymaking and playing of trumpets".[1] It was only in 1576 that a Portuguese sea-farer, Manoel de Mesquita Perestrello described the Cape of Good Hope in some detail. He recognised the "huge rock that was observable and appeared to be an island, but is not, and beyond it on the eastern side a great chain of mountains running north and south with many peaks and a break in the middle ..."

It was, however, an unknown author accompanying Sir Francis Drake, the first English circum-navigator, who wrote the words that have since become so well known: "This Cape is a most stately thing and the fairest Cape we saw in the whole circumference of the earth ..."[2]

Much was written about the "Baay Falso" during the ensuing years, although no one was reported to have landed there

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1. Quoted in Green, L.: The Tavern of the Seas, p.165.
2. Quoted in Raven-Hart, R.: Before Van Riebeeck, p.14.

or taken any interest in the area until Commissioner Rijckloff van Goens, during a visit to the Cape, proposed to the Commander, Jan van Riebeeck, that a canal dug from False Bay to Table Bay would cease the activities of the rustling Hottentots![3] The first management proposal had been made. An unimpressed Van Riebeeck fortunately shelved the idea as soon as he could, but did issue the placaat that "no fishing shall be allowed except by consent of the commandant".[4] It was through the Dutch East India Company flute, the Usselsteijn, that the first definitive move in using the Bay was made. Prompted by a favourable report on the conditions for anchoring and its fertile coastline that the ship's captain had forwarded, the authorities in Batavia ordered him to take possession of the Bay.

The first kraal and dwelling house along the False Bay shoreline was built during November 1673. However, the abundance of marauding wild beasts, irrepressable Hottentot thieves and the scarcity of fresh water discouraged the commissioners of the Cape at the time from promoting any further farming activities further afield than the slopes of the Hottentot Holland Mountains.

3.1.1 Simonstown

The disasterous Table Bay storm of 1722 which wrecked the entire resident Dutch fleet with the loss of some 600 lives, and another storm during 1737 spurred the authorities to take a closer look at the potential of False Bay as an anchorage during the winter months. In February 1743 the

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3. Burman, J.: The False Bay Story, p.8.

4. Quoted in Robb, F.: Fishermen of the Cape, p.4.

Governor General of the East Indies ordered the Cape authorities to build a warehouse at Simons Bay, and to include a hospital, doctors' living quarters and a garrison for the troops. He also detailed the establishment of a supply base on the beach of what is now Kalk Bay with the further mandate that from April onwards two of the larger boats lying in Table Bay were to be used at Simons Bay during the winter months.[5] The first step in establishing False Bay as an important Company post had been taken. In 1761 a permanent official, named a "Resident", was appointed to administer the Bay. The military victories at Muizenberg and Wynberg in 1795 initiated the First British Occupation of the Cape. It was this conquest of the Cape that provided the springboard for the development of False Bay in general and Simonstown in particular. By the time of the Second British Occupation of the Cape in 1806, after a brief (:) Batavian rule, Simonstown, the Tavern of the Seas, and the neighbouring settlements of Fish Hoek, Muizenberg and St. James were flourishing.

Sarah Eaton, a notable character of her day, described Simonstown as "... not large, but the houses are good, and it is clean and neat, surrounded by mountains and water. By many considered wild and dreary - but the Bay filled with shipping is extremely beautiful and every house has a view of it ... English ships of war constantly going in and out of the Bay ... generally have passengers of both sexes on board varies the society and makes it very gay and lively ... There are about twelve resident families besides the bachelors".[6]

In 1881 a Village Management Board took over the affairs of Simonstown, to be succeeded by Municipal status in 1891. During the Anglo Boer war the town became a major port of

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5. Burman, J.: Op.cit., p.58.
6. Cape Almanac, 1833.

entry and supply for the British Army, as well as a prisoner-of-war camp. Today it still remains inextricably linked to Naval activities.

3.1.2 Kalk Bay

Simon van der Stel, during a trip made to False Bay to investigate the fishing potential, spoke highly of its bounties. He recorded in his journal " ... the men on landing could find no spot in which to place their feet without treading on seals or birds ... It was so easy to catch fish that one could not quickly enough throw the hooks into the water in order to draw them up again ..."[7] In 1816 an entrepreneur Stephen Twycross offered a fishery for sale with "about 250 leagures of oil and a considerable quantity of whalebone".[8] This site is the origin of the marine oil refinery situated in Dido Valley today. The erection of seaside cottages and the opening of the Kalk Bay Hotel in 1851 earned Kalk Bay the praise of being "a salubrious and fashionable watering place - the Brighton of the Cape".[9] A thriving fishing industry and whale oil station developed within years after the first Philipino couple realised the potential of the rich marine resources. These fishermen lived in the little hamlet and provided it with the character that still lingers on today.

Kalk Bay was not far behind Simonstown in self government. In 1891 a Village Management Board was created and by 1895 this had been elevated to full municipal status when it amalgamated with Muizenberg.

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7. Quoted in Robb, F.: Fisherman of the Cape, p.4.
8. S.A. Commercial Advertiser, 21 December 1816.
9. Burman, J.: Op.cit., p.116.

Reports of the excellent opportunities for conchology, bathing, mountain climbing and watersports drew people to the sheltered, warm waters and sandy beaches of Muizenberg.

In June 1884 the S.A. Illustrated News reported that some sixty or seventy boats attracted a crowd of over 600 spectators to the first of a series of rowing regattas at Sandvlei. Yet it was the opportunities for bathing that provided the greatest attraction to the resident and visitor alike as well as a thorny problem for the local authority to tackle. On its small budget the municipality had to provide amenities for these visitors - temporary sojourns who contributed little towards the cost of services. The rash of wooden bathing huts illegally erected were substituted by the construction of an impressive bathing pavillion in 1910, the last major service rendered by that municipality prior to its amalgamation with the municipality of Cape Town.

3.1.3 Fish Hoek

Fish Hoek too thrived on its seaside attractions, and the local Village Board, established in 1927, was faced with the contentious issue that still faces the town today: should it remain independent or come under the enveloping wing of the Cape Town Municipality. At the time it seemed that amalgamation was inevitable. Now, some 52 years later, the situation remains the same. Fish Hoek obtained municipal status in 1940, and has developed into a thriving and popular seaside suburb despite its policy of prohibiting liquor trading and industry.

The attempt to stop wind-blown sand from covering the road built by the Central Roads Board across the Cape Flats in 1845 precipitated one of today's greatest ecological threats

to the False Bay hinterland - the introduction of Australian species of Acacia and Hakea.

3.1.4 The Eastern Regions of the False Bay Zone

To the east of the Bay, Somerset West has remained a strictly residential or "garden town" while the Strand has developed industrially. The Strand became another popular resort when the branch railway opened at the turn of the century. The railway allowed for the establishment of the first industry - a dynamite factory backed by Cecil Rhodes in 1899 - and tourism. The character of the Strand was determined in those early days by its municipality. Then, just as they do now, the town elders had to tread a delicate tight-rope; it had to marry the development of commerce and industry with the promotion of recreation and tourism; an unenviable task.

Despite its growth, Gordons Bay has been able to retain much of its charm, as the establishment of the fishing harbour in 1939 and the commissioning of the S.A. Naval College have hardly impaired the restful atmosphere and delightful setting. The management of this little village rested in the hands of a Management Board from 1902 to 1961 when the existing municipality took up the reins.

The nature of the management perspective was moulded in those early days - today it is merely of a greater magnitude with more people competing in more ways for ever depleting resources.

3.2 THE PHYSICAL SETTING

The physical and biological processes that determine the Bay's natural assets and limitations provide the baseline

for management, as it is only through the recognition of these features that the regulation of human activities can be effectively determined. The map in Figure 3.1 on page 129 provides a graphic representation of these processes.

The physical processes from which the biological processes derive their support, can be grouped into three broad constituents. These are Geology, Hydrology and Climate.

The topography of the False Bay System is characterised by the Southern Peninsula mountain chain on its western margin, the Hottentot Holland and Kogelberg ranges in the east and the Tygerberg hills along its northern extremities. The central area, the "Cape Flats" is a broad, flat sandy basin. The high relief areas regulate the water supplies by acting as the sources for rivers and streams, they influence the climate and dictate human settlement patterns. Basically unsuited for property development and as such relatively unspoilt, these mountains have provided great scope for recreation, tourism and conservation. The low-lying regions have offered the finest opportunity for development and consequently support the bulk of the population.

The large tracts of white sand beaches, rocky fringes and sandstone cliffs make the False Bay coastline varied in form and limitless in providing natural facilities for shore-line activities. The soil is moderately fertile throughout the area, and where the terrain allows, lends itself to farming - particularly the production of vegetables and flowers. The principal minerals that are currently exploited are silica sand, clay stone and kaolin found in the Phillipi-Strandfontein area. Extensive kaolin deposits also occur near Fish Hoek.

The morphological features of the floor beneath the Bay

are of limited importance, as they do not hinder existing shipping or fishing to any great extent, although the long-shore transportation of sediments and sand is an important factor regulating the selection of sites for harbours and ports. The known transportation patterns are in a clock-wise direction with one culmination point near Gordons Bay.

The sediments of the Bay provide both a habitat and a food source for numerous species of benthic fauna. They also provide a "sink" for accumulated pollutants that find their way into the Bay and if researched can assist in the management of effluent discharge and other pollution.

The currents, winds, temperatures and tides form the major components of the marine hydrology. The rivers, vleis and the Cape Flats Acquifer determine the nature of the terrestrial water systems; while the estuaries are affected by both.

In the marine system all the abovementioned aspects influence the numbers and movements of flora and fauna. The upwelling induced by the summer southeasterly winds, brings nutrient rich water into the Bay. This in turn attracts the huge shoals of pelagic fish that are preyed upon by larger game fish and fishermen alike. The moderately warm waters throughout the year make False Bay more popular than the West coast for swimming, diving and related pursuits.

Apart from being a source of water for the human inhabitants of a water deficient metropolitan region, the rivers, streams and vleis support huge populations of flora and fauna - the most notable being the birds that reside at and seasonally visit the five major vleis. The two largest rivers, the Eerste and Lourens drain the Southeastern part of the Cape Flats and the Hottentots Holland range, while the remaining sections of the Flats are drained by the Westlake, Keyser

and Sand rivers and the Langevlei and Zeekoevlei canals.[10]

The climatic conditions that prevail in the Bay and its Basin are significantly affected by a number of physical features and in turn, affect certain biological processes. The predominant north-westerly winds in the winter and southeasterly winds in the summer are influenced by the extended mountain ranges in the west and east, causing an increase in the mean wind speeds by compression and funnelling at Muizenberg and Faure.[11] Wind velocities and frequencies are the primary factors in air pollution dispersal and thus should be a major consideration in the selection of industrial and manufacturing sites. The general climate, being typically Mediterranean, is warm and condusive to a wide range of human activities - despite the long spells of rain in winter and irritatingly persistent "South Easters" in summer.

The most important biological processes that occur in the defined area can be divided into aquatic and terrestrial.

3.2.1 Aquatic Components

The marine floral component differs largely from that of the west coast with a reduced abundance, from most of the Bay, of the macro algae or kelps that are so abundant in the colder waters. Despite this, primary productivity can be extremely high and the micro algae like the algal gardens of the limpet Patella cochlea as well as the high phytoplankton levels, provide a vast food resource for the herbivorous creatures next up the trophic chain.

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10. Grindley, J.: The Hydrological Environments of False Bay, False Bay Management Symposium Proceedings, 1980, p.29.

11. Keen, C.: Meteorological Aspects of False Bay, Symposium Proceedings, Ibid., p.34.

Lying in the overlap of the south and west coast faunistic provinces, False Bay contains a mixture of warm and cold water species. Several communities of benthic invertebrates and large populations of other lower order animals make the deep water and intertidal zones abundant with life. The fish of the Bay are generally divided into resident and pelagic stocks. The resident reef and sandy bottom feeding fish include Kabbeljou, Steenbras, Galjoen, Blacktail, Red Roman and Silverfish as well as the ubiquitous Hottentot. These fish provide the basic catches for the commercial line and recreational fishermen. The pelagic fish follow defined migratory patterns that are related to the ocean currents. These fish include Snoek, Massbankers, Pilchards, Yellowtail and Tuna. Except for the Snoek, a winter migrant taken mainly by line, these fish visit the Bay for a short period of the year during summer and are subjected to extensive purse-sein netting. The shore based "trek" netting exploits the large Haarder populations.

The birds and mammals are further integral parts of the marine environment. Seal Island alone supports a breeding population of some forty-five to fifty thousand seals while the Bay attracts frequent numbers of dolphins, killer and Southern Right Whales. The avifauna is abundant and varied with large numbers of gulls and cormorants perenially supported on land and sea based resources. Penguins frequently enter the Bay.

3.2.2 Terrestrial Components

Turning now to the land, nature's endowment becomes equally rich. The Western Cape is recognised as being one of the six Floristic Kingdoms of the World. The perimeter of the Bay supports an impressive range of communities, with some 2 200 species of plants in the Peninsula alone. This

floral richness is not matched by its faunal component, which is limited to small numbers of reptiles and smaller mammals. Outside the Cape of Good Hope Nature Reserve, which supports modest herds of antelope including Eland, Blesbok, Haartebees, Mountain Zebra and Springbok as well as ostriches, the chacma baboons are the last remaining large free ranging animals.

Boosted by the large influx of annual migrant waders to the vleis and wetlands of the Cape Flats, most particularly Rondevlei Bird Sanctuary, the bird species are believed to exceed one hundred in number, with a small percentage endemic to the area.[12]

Uncontrolled fires, the rapid spread of alien vegetation and rampant urban sprawl threaten the remaining plant and animal vestiges of the Bay and environs and the seventy five[13] endangered plant species are a stark reminder of the sensitivity of the natural environment to man's advances.

3.3 THE SOCIAL DIMENSION

The Bay's physical attributes have attracted a multitude of actions in, on or around it, ranging from sunbathing to effluent discharge from mountaineering to mining from birdwatching to naval bombing. These activities are so numerous and diverse that they represent virtually every field of human interest and endeavour.

In this chapter, no attempt is made to make either a quantitative or qualitative analysis of the extent of these

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12. Personal communication with Chief Warden, Rondevlei Bird Sanctuary.

13. Hall, A.V.: Terrestrial Nature Reserves in False Bay Symposium Proceedings, p.106.

activities. The theme is merely the identification and description of the major human demands.

Although it is recognised that any absolute partitioning of human exploits may prove unsound, as it defies an holistic perspective, the activities noted will be divided into two major categories, namely "fixed" and "dynamic" merely to facilitate description.

By "fixed" is meant those activities which result in a definitive and often permanent physical change in the status and form of the resources being utilized. These activities usually involve the manipulation of the natural environment and are generally seen as the subject of land use or physical planning.

The "dynamic" activities are those which may continually recur and act upon both the human and natural environment. These activities may have a permanent impact on the environment although they deal essentially with renewable resources. These activities fall into the realm of behaviour regulation. Despite the pattern that emerges, many activities develop a dual nature. For example, the construction of a factory (a fixed action) and its subsequent generation of products and waste (a dynamic action).

The "fixed" actions are divided further into six categories and each category is described below, with references to their occurrence in False Bay. A general statement of the potential impact follows:

Figure 3.1 on page 129 indicates the major activity zones.

1. Industrial and Manufacturing Development. This includes the construction of factories and other industrial sites.

The bulk of this development has been restricted to the Northern limits of the False Bay zone in the Bellville, Parow, Goodwood and Salt River area, although the Strand, Simonstown, Wynberg and Gordons Bay do support some manufacturing. Recently these practices have been promoted along the main road between Wynberg and Muizenberg and a number of factories now operate in Retreat and Lakeside where the rich swamps and wetlands have been destroyed or threatened.

2. Commercial, including Mining, Wholesale and Retail Businesses such as Shops, Hotels and Restaurants

Commercial ventures have permeated the region and wherever people live or visit, businesses are apparent in one form or another. The intensity of this activity correlates directly with the intensity of population, and is thus concentrated along the western limits from Simonstown to the Southern Suburbs. The northern boundary of the area is an important business zone while only the Strand and to a lesser extent Somerset West and Gordons Bay on the eastern flank support any commerce of notable proportions.

Mining takes place on a limited scale in the central Cape Flats where silica stone and clay deposits are exploited. The existing small scale Kaolin mining in the Fish Hoek Valley may be dramatically increased if present plans reach fruition.

3. Provision of Services

This category includes the provision of the following:

3.1 Transportaiton facilities: An intricate system of roads of all standards link every part of the defined

area, while a suburban rail line links the suburbs from Simonstown northwards, with Cape Town. A branch of the main line runs from Bellville to Somerset West and the Strand. Cape Town's major air terminal, D.F. Malan Airport, lies within the confines of the basin, in the middle of the Cape Flats.

3.2 Docks and Harbours: Simonstown dockyard is the base of the South African Navy, while Gordons Bay and Kalk Bay are two proclaimed fishing harbours. All three ports provide moorings for a large number of commercial and pleasure craft. There are also seven boat launching ramps along the coastline of False Bay.

3.3 Communication Networks: Other than the new naval communication base at Westlake and the Cape Point Lighthouse and radio station, communications development is limited mainly to postal and telephone services.

3.4 Water and Power Supplies: Other than the Steenbras dam hydro-electric pump storage scheme above Gordons Bay, power is supplied by ESCOM from the stations situated outside the False Bay area.

3.5 Health and Education: A number of hospitals, such as those at Simonstown, Fish Hoek, Wynberg and the Strand, and clinics, supply most of the medical needs of the area.

Some 150 schools provide for the educational demands of the local population.

4. Housing/Residential

Residential development has been largely determined by the topography of the terrain. Scattered low intensity housing,

generally all private, occurs all along the Eastern regions. The Western sector up to Simonstown is well developed, particularly the high density state subsidised scheme of Sun Valley in the Fish Hoek Valley. Along the northern shoreline and further into the hinterland the massive Mitchells Plain development is transforming the vast sandy reaches into a dormitory city for some three quarters of a million people.

5. Agriculture, including Forestry

Agricultural activities are restricted to the Cape Flats and North-eastern region. State forests occur around Constantia and Tokai in the west in the Jonkershoek area in the north-east and the Kogelberg and Hottentot Holland mountains on the eastern limits.

6. Conservation, including all forms of the conservation of natural habitats, flora and fauna as well as the preservation of the cultural-historical heritage and archaelogical sites

Apart from the state forests and mountain catchment areas there are a number of proclaimed terrestrial reserves and one marine sanctuary. These are the Cape of Good Hope Nature Reserve, the Silvermine Nature Reserve, the Rondevlei Bird Sanctuary, the Steenbras Nature Reserve and the Swartklip Nature Reserve. The Castle Rocks Marine Reserve plays a small but welcome role as a marine resource sanctuary.

The proposed Table Mountain and Southern Peninsula Mountain Chain nature area will incorporate a number of smaller conservation areas and make an unprecedently large contribution towards the protection of the Peninsula's natural heritage. The boundaries of this proposed nature area

are indicated on Figure 3.2 on page 40.

Many historical buildings in Simonstown and others like Rhodes cottage are afforded protection by the local authorities and National Monuments Board.

Dynamic activities both emanate from and generate further fixed activities. Only the briefest possible description of these activities is offered below.

These activities which can be grouped into three major headings, namely commerce, services and recreation.

1. Dynamic activities associated with commerce

These include industrial, manufacturing and business activities which are profit orientated.

1.1 The generation of labour opportunities for the increasing resident population.

1.2 The generation of products to satisfy local and other demands.

1.3 The generation of wastes including solid waste and noise, atmospheric, and water pollution.

1.4 The creation of a demand for natural resources such as land, raw materials and water as well as a demand for services such as communications, transportation and housing.

1.5 The generation of revenue for inhabitants, businesses and authorities (particularly in the tourist industry which is said to generate some R50 million or more

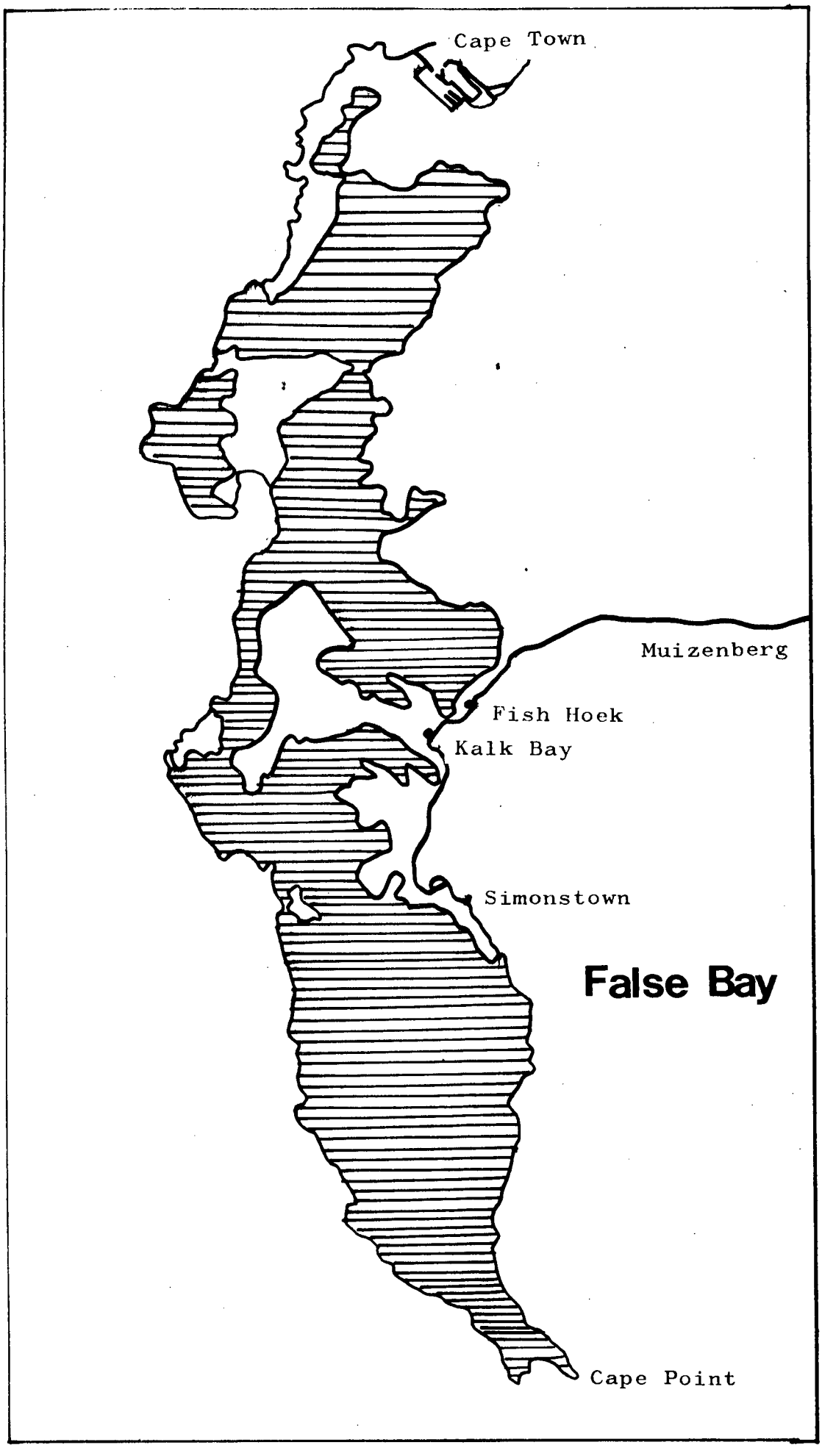

FIGURE 3.2 PROPOSED NATURE AREA

per annum).[14]

1.6 The physical destruction of the natural environment or the impairment of the aesthetic value of the beauty of the natural environment.

2. Dynamic activities associated with the provision of services

The provision of services by a local authority or state department cannot by definition be profit orientated, although local authorities may generate funds by levies or fees. This financial characteristic does not, however, otherwise affect the nature of activities which may correspond directly with commerce.

Where some services such as road construction may facilitate transportation at the cost of environmental quality, others such as the establishment of parks or nature reserves may protect or even enhance the natural environment.

Innumerable services, ranging from sewage disposal to naval defence, are offered within the confines of the Bay - all of which have some impact on the physical and social environment and on management.

3. Dynamic activities associated with recreation

Here, too, the list of activities is endless. Recreation includes all amateur sports and leisure time pursuits. Most of those practiced in and around the Bay do not inherently pose a threat to the life or wellbeing of individuals in the area, but if excessive in terms of numbers or execution,

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14. Hall, A.V. (ed.): Understanding the built and natural environments of the Cape Peninsula, Preface.

even seemingly innocuous recreational pursuits may have significant environmental impacts.

Rock angling, spearfishing and boat fishing have become so popular as so threaten the sustained regeneration of the exploited stocks. Dune riding and off-road scrambling have caused extensive damage to fragile ecosystems[15] and have, where practised indiscriminately, injured people or at least are a source of annoyance to those indulging in other more passive pastimes. Even hiking or walking has had to be restricted from certain natural areas because of the disturbance caused by the mere presence of humans or their pets. The oyster-catcher sanctuary in the Cape of Good Hope Nature Reserve is a case in point.

Of the dozens of activities associated with recreation, each and every one has to be, or will have to be, controlled in one way or another because of either the sheer weight of numbers or the nature of the activity.

The following chapter deals with the mechanisms that currently exist to plan and regulate these activities.

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15. Rabie, A.: Buiteweg voortuie op strande.

THE CURRENT PLANNING AND CONTROL MECHANISMS AND THEIR PERCEIVED DEFICIENCIES

As planning may be undertaken without the necessary control to implement it, and as it appears that control may be performed without adequate planning, the two functions will be treated independently. A brief description of, firstly, the control structure and secondly the planning procedures that are employed in the management of this multi-jurisdictional area, will be followed by an account of the deficiencies of both mechanisms. The maps on pages 14 and 130 provide a diagrammatic representation of the various jurisdictions, and should be referred to in conjunction with Table 4.1 on pages 132-137.

4.1 THE CURRENT CONTROL STRUCTURE

The three-tier government structure presently employed in South Africa provides the basic structure of control for False Bay. Two salient features of this system need to be noted.

Firstly, there is a distinct hierarchy of status and power that dictates the extent of legal competence or scope of responsibility of each tier of government. At a national level, the state departments and public corporations, constituted and empowered by an Act of Parliament, enjoy the highest authority and can override the regional authority, the provincial administrations. As parliament is sovereign the provincial councils are subordinate and their legislation, the provincial ordinances, are preceded by statutes. In turn, the provincial administrations are responsible for the local authorities, which in the Cape comprise both

municipalities and divisional councils - traditionally the town or city councils and the rural management boards. These local authorities are answerable to their respective provincial authority through, in the case of the Cape, the provincial department of Local Government. The scope of jurisdiction, both geograpahically and legally, of each level of government is clearly defined in terms of their enabling legislation.

The second important factor that warrants special comment is the nature of responsibility of each tier. Although collectively they cover the full ambit of human activity, each individual state department is primarily unifunctional - that is to say, involved in only one facet of the state's overall role. This situation is necessitated by the scale of operation which imposes certain drawbacks; disunity of purpose, clashes of interest and the omission or overlap of functions being but a few. The co-ordination of actions at a national level is frequently at a premium, thus hampering integration. This dilemma is mirrored to a lesser extent at the provincial level where, due to constitutionally curbed delegated powers, only five general functions are performed under the five responsible departments in the Cape Provincial Administration. These functions are White education, hospital services, local government, nature and enviornmental conservation and roads. Liaison between various departments at this intermediate level has appeared to the author to be little, if any, better than that at the state level.

The local authorities, despite their legal bonds, tend towards greater unity of purpose. Although there may be a subdivision of tasks and resultant clash of interest within any local authority, the scale of operation lends itself towards an integration of functions. A general increase in responsibility through closer personal affiliation and commitment also assists functional integration.

Despite its patent advantages at such a level, parochialism, as will be indicated in the final section of this chapter, has severe limitations.

With the scope and nature of the responsibilities at each level of government briefly outlined, the three tiers of government will be used as the basis for discussion of the management of False Bay and its basin.

4.1.1 Tier One : State and Quasi-State Bodies with Influence or Jurisdiction

The jurisdiction of these bodies can be functionally or geographically determined. A department or agency with a functionally determined scope is one which exercises specific powers over a broad or even unrestricted area, transcending all but international boundaries. Provisions in the Health Act 1977 (No. 63 of 1977), for example, give the Department of Health, Welfare and Pensions limited rights over nationally undefined areas. A department or agency with a geographically determined scope can exercise almost unlimited powers only within a clearly defined or proclaimed area. An example would be the National Parks Board of Trustees, which has been granted extensive powers only in proclaimed National Parks. In most cases agencies with geographically determined jurisdiction own or have rights of control over defined land.

It must be noted that ownership need not imply absolute control, as in most cases ownership rights are subject to varying degrees of restrictions. It follows, mutatis mutandis, that ownership is not a prerequisite for control.

Table 4.1 provides a summary of the legislation affecting False Bay. The table comprises a list of the resources

present in the defined area, the activities that affect them, the zone and area involved, the controlling bodies and their enabling legislation.

Figure 4.1 on page 130 indicates the major involvement of the state and provincial departments in False Bay.

The major state bodies which have a direct bearing on the management of the defined area are:

1. Department of Agriculture and Fisheries: The Sea Fisheries Institute is responsible for the control of all sea fisheries as well as the control over certain islands and rocks, the control and killing of sea birds and seals and the disposal of the products of sea birds and seals and other related matters. The control of "sea fisheries" extends over all living marine resources in the sea as well as sea weeds, shells and salt. The sphere of influence extends over all land and water, including water and beds of tidal rivers and tidal lagoons, from the high water mark to the 200 nautical mile limit of the South African Fishing Zone. Activities on seal island and rocks such as Batsata, Roman, Ark,Partridge and Steenbras are controlled, and quotas for the harvesting of seals and guana are regulated by the Institute. The Institute is also responsible for the control of the two proclaimed fishing harbours of Kalk Bay and Gordons Bay, as well as the only marine sanctuary, the Castle Rocks Marine Reserve. The Directorate of Agriculture regulates all agriculture-related activities that take place in the Cape Flats watershed.

2. Department of Community Development: This department has two major involvements in the False Bay area.

The Land Affairs branch administers the Sea Shore Act and

the State Land Alienation Act, and is thus responsible for the control over the sea shore and other state land, of which the State President is the nominal owner. Along the False Bay Coast, control of this land has been delegated or otherwise alienated to other state departments, the provincial administration or local authorities. Except in the case of the transfer of ownership, ultimate responsibility for the regulation of activities on the land and sea between the high and low water mark as well as the bed of the sea as far as the Territorial waters of the Republic, rests with this Department.

The second important function is that of the provision and subsidisation of homes and housing loans. The majority of public housing developments are subsidised to a certain extent by this Department. In administering the Group Areas Act (No. 36 of 1966) and article two of the Physical Planning Act (No. 88 of 1967), the department is empowered to determine the location and racial designation of all state subsidised housing. The Mitchells Plain and Sun Valley schemes are those most important in the area.

3. The Department of Environment Affairs (the former Department of Water Affairs, Forestry and Environmental Conservation) has two directorates that exert significant influence on the management imperative while the department as a whole is responsible for the regulation of all dumping at sea. The Directorate of Water Affairs is responsible for the regulation of water quality and quantity by the control of flow rates and discharge rates of all waters that ultimately flow into the Bay. This control is extended over the use and conservation of all public and private fresh water for domestic, agricultural, urban and industrial purposes. In the case of purification and disposal of industrial water and effluents, jurisdiction is extended over sea water. Some nine permits regulate the emission

of effluents in the rivers, streams and sea, in and around the Bay. The provision of water in the area is the responsibility of the local authorities.

The Directorate of Forestry is entrusted with the establishment and management of the State Forests and Mountain Catchment Areas. In terms of the three enabling acts, this directorate exercises control over the tenure, demarcation, management and utilization of proclaimed forests as well as the conservation, use and management of land situated in mountain catchment areas. Powers to combat and prevent fires are also conferred on this directorate. The Environmental Conservation Branch also administers the Nature Areas proclaimed in terms of the Physical Planning Act (No. 88 of 1967).

4. The Department of Defence controls the Naval installation at Simonstown as well as the demarcated peripheral water. Further, land to the east of the Mitchells Plain scheme, the Silvermine Maritime Headquarters and the Naval College at Gordons Bay, fall under the direct control of the Department of Defence.

5. The Ministry of Transport Affairs, through its Civil Aviation Branch controls all civil aviation and the D.F. Malan Airport that lies in the area. It is responsible for the building and maintenance of national roads, and through its Marine Branch, administers legislation regarding the prevention and combatting of pollution of the sea by oil and merchant shipping.

The South African Railways and Harbours Administration controls the suburban railway line running from Simonstown to Cape Town and the main line branch from Kuils River to the Strand, as well as the other arterial lines indicated on the map on page 130.

6. Office of the Prime Minister. The Physical Planning Branch of this office, although essentially a planning authority, does have powers to regulate certain activities within controlled areas. Much of this responsibility has been delegated to other State authorities, such as the Ministry of Internal Affairs in the case of the reservation of land or particular purposes.

In terms of Section 4 of the Physical Planning Act (No. 88 of 1967), the Ministry of Internal Affairs is responsible for the reservation of the land and the issuing of permits to enable the extraction of kaolin, silica sand, clay and other mineral deposits.

There are a number of other state agencies which have a minor or indirect influence on the management of False Bay. These include the Departments of Health, Welfare and Pensions; Coloured Affairs; National Education which includes the Branch of Sport and Recreation; and Prisons.

4.1.2 The Second Tier : The Provincial Administration of the Cape of Good Hope.

This comprises five departments. Of these only Nature and Environmental Conservation has extensive ownership and control of land in the area. This department plays an important role in the regulation of exploitation of terrestrial and fresh water flora and fauna as well as in the control of the thirty-three proclaimed nature reserves and field stations, and the subsidisation of some sixty local authorities and private nature reserves.[1] It is also responsible for the subsidisation and administration of some thirty-seven Cape Museums of which two, the Simonstown

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1. Cape Department of Nature and Environmental Conservation: Annual Report No. 36, p.108.

and Stellenbosch museums fall into the False Bay area.

A list of all provincial, local and private reserves in or around the False Bay area appears in Table 4.2 on page 138.

The department of local government, although not a land owner, has interests in most aspects of the area's management. One of its principal tasks is the establishment, abolition and combination of local authorities and management committees. This responsibility extends to most areas of local authority involvement including cemetries, boundaries and land transactions. This department is further responsible for the development and racial zoning of beach facilities and the regulation of township establishment. As part of its role as co-ordinator and overseer of local matters, the last two functions are of cardinal importance to the management of a multi-jurisdictional area like False Bay. One of the Committees of Local Government, the False Bay Coastal Development Committee, has been briefed to plan the development of the "open beach" coastline between Strandfontein and the Strand.

Further involvement in coastal development at a provincial level is apparent in the Cape Coastal Survey[2] published in 1973.

The other departments, namely Health, Roads and Education plans an important part in the provision of services. Their involvement in the overall management of the area is of less consequence to this paper than those departments mentioned above.

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2. Cape Provincial Administration Town and Regional Planning Section: Cape Coastal Survey Report Nos. 1 and 2, 1973.

4.1.3 The Third Tier : Local Authorities

Along the 110 Kilometres of False Bay coastline, six municipalities and three divisional councils have jurisdiction over territory extending inland from the high water mark. Depending upon what northern boundary is accepted, the additional local authorities and management committees in the watershed may range in number from four to nine.

The Western Section is dominated by the Cape Divisional Council with its area of jurisdiction stretching from Cape Point to Simonstown. The majority of this area lies within the Cape of Good Hope Nature Reserve.

Simonstown municipality and Fish Hoek municipality are linked except for a small buffer area belonging to the Cape Divisional Council. The section of coastline that falls under the Cape Town City Council encompasses a very large stretch of particularly popular beach front. Running from Fish Hoek to Strandfontein, this frontage includes many of the "warm-water" beaches such as Dalebrook and St. James as well as Kalk Bay, with its fishing harbour, and a sizeable amusement centre at Muizenberg.

The Cape Divisional Council administers another large and formerly unpopular stretch of coastline along Stransfontein up to Swartklip. This area has recently become one of high demand since the commencement of the Mitchells Plain housing scheme.

The section from Swartklip to Macassar falls under the jurisdiction of the Stellenbosch Divisional Council. This area has also recently become an important coastal strip for recreation and conservation, particularly in Kuils River.

A string of small sections of seafrontage controlled by Strand Municipality, Gordons Bay Municipality, Stellenbosch Divisional Council, Caledon Divisional Council, Cape Town City Council (Steenbras Dam) and the Directorate of Forestry follow. The Caledon Divisional Council controls the final section of False Bay coastline up to and beyond Cape Hangklip. Inland of these five local authorities lie others which control land in the watershed, and in which activities take place that exert influence on the Bay itself.

A fourth level, though not tier, of government exists in the form of community management associations. These are racially divided, with white persons eligible for representation through both ratepayers associations and local authority wards. The boundaries of these two civil bodies generally concur. The Wards are the voting constituencies for representation on the local authorities' councils. The "Coloured" and Indian communities are deprived of direct representation at a local, provincial and national level. At this lowest level, management committees have been established under Provincial Notice 564/1963 in terms of Section 4 of the Local Authorities (Development according to Community) Ordinance No. 6 of 1963. The two major local authorities, the Cape Town Municipality and the Divisional Council of the Cape administer four and six such committees respectively. Of those administered by the Divisional Council, three "Coloured" (Elsies River, Grassy Park and Matroosfontein) and one Indian (Ravensmead) fall within the False Bay catchment area. The City Council administers two "Coloured" (Athlone and Wittebome/Wynberg) committees in the area. These management committees have only limited influence over the activities within the specific townships which they serve. For this reason the residents in the largest single residential community within the area of study, Mitchells Plain, have rejected indirect representation in local government matters and demand full municipal voters

rights. Despite persistent attempts by the Cape Town City Council to secure these rights, moves towards normalisation of representation at a local government level have been thwarted by central government policy.

As the recognition of social demands is a vital component of any attempt at integrating the management of common resources, the current political arrangements will have to be changed.

4.2 THE CURRENT PLANNING PROCESS

As with the control structure, the public planning process is subject to a strict hierarchy that comprises four tiers rather than the three tiers of government.

4.2.1 National Level

At a national level, the Office of the Prime Minister is responsible for the co-ordination of all planning in the Republic. This task is divided into six sections, each assuming responsibility for various aspects. These are the Economic, Social, Physical, Science, Constitutional and Security planning branches.

These branches may either administer a specific act or co-ordinate the implementation of acts administered by other State Departments and Government Agencies.

The Physical Planning Branch administers the Physical Planning Act (No. 88 of 1967) which enables the Branch to promote co-ordinated environment planning and the utilization of th Republic's resources, as well as control of the

zoning and subdivision of land for industrial purposes and the establishment or extension of factories. The reservation of land for specific purposes, the establishment of controlled areas and the compilation and approval of guide plans are further powers envisaged under this act. Certain sections of this Act have been delegated to the Departments of Mineral and Energy Affairs, Agriculture and Fisheries, Community Development, Industries and Provincial authorities.

In addition to the six branches of the Office of the Prime Minister four advisory bodies to the Prime Minister exist. These are the Planning, Scientific, Economic, and State Security Advisory Councils. A subsidiary Committee on the Coastal Zone for the Prime Minister's Planning Advisory Council has been established to co-ordinate the planning of development in the coastal zone. This committee sits annually in Cape Town.

These branches and advisory bodies are collectively responsible for the drafting of the National Physical Development Plan that provides the guidance for all forms of development at the national or macro level. This plan has identified growth poles, existing and future development axes, and has demarcated the Cape Metropolitan area as one of the four metropolitan areas of the forty-four planning regions of the Republic. The major implication of the National Physical development plan for the False Bay region is that it proposes a growth node to the North of the Cape Metropolitan region, along the Atlantis-Saldanha axis, and does not implicitly promote further development within the Cape Metropolitan area. Figure 4.2 on page 131 indicates the spatial Development Strategy for the Western Cape.[3]

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3. Department of Environmental Planning and Energy: A Spatial Development Strategy for the Western Cape, 1980.

4.2.2 Provincial Level

At the provincial level, the Town and Regional Planning Section of the Department of Local Government administers Township Ordinance No. 33 of 1934. This ordinance empowers the section to regulate the establishment of townships and the subdivision of land and to provide for the preparation and approval of town-planning schemes. The section is divided into three regions, the East Coast, Peninsula and surrounding areas, and the West Coast and interior. In 1973 the department published the Cape Coastal Survey which outlined guidelines for conservation and resource management for the whole of the Cape Coast. The survey also included an assessment of the outdoor recreation and holiday industry, and a detailed explanation of the need and desirability criteria against which applications for township development and service allocations are considered. The key elements of these criteria are given in Table 4.3 on page 139 of the Appendix.

The False Bay zone falls under one of the three subdivisions of this section's responsibilities, namely the Peninsula and surrounding areas.

4.2.3 Regional Level

The Cape Metropolitan Planning Committee was established in terms of Section 6A of the Physical Planning Act in order to prepare a Guide Plan for the geographical area demarcated in the National Physical Development Plan as region 39. This committee replaced the Joint Town Planning Committee which had also been responsible for the co-ordination of regional planning. The Committee comprises twenty-one representatives from the local authorities that fall within the demarcated area and is supported by a

Directorate consisting of a Director, Deputy Director, profesisonal, technical and administrative staff.

The Draft Guide Plan, published in 1977, identified the goal of the committee as being "... the achievement of the highest level of social, physical and economic wellbeing of the present and future population of the area". More specific objectives for the activity systems, metropolitan structure and function, and for metropolitan transporttaion supplemented the overall goal.

The Guide Plan prepared by the Cape Metropolitan Planning Committee becomes statutory once ratified by Parliament via the Office of the Prime Minister. No provision has been made for the monitoring of developments within the guide plan area, and any changes to the guide plan require further parliamentary ratification.

Although prior to proclamation, the recommendations of the Committee may contribute to an overall national plan, they are not enforceable as the Committee is not vested with executive powers. The Committee only performs an advisory role between the various local authorities. The boundary of the Cape Metropolitan Guide Plan area is indicated on the map on page 14.

4.2.4 Local Level

The final level of planning in the public sector takes place at a local authority level. Only the larger authorities have a town planning branch which in the case of the Cape Town Municipality, is housed in the Engineer's department. Operating under various by-laws, the local authorities are responsible for planning within the restraints of state or provincially determined land use zones, group

areas, and townships. Although three tiers of planning exist above this level to co-ordinate and approve local schemes, municipalities and divisional councils are relatively autonomous and may initiate developments that have a profound effect on neighbouring authorities and the region as a whole. The imposition of unpopular higher level decisions that supercede local jurisdictions is also a real complication in the planning process.

Private planning needs little elaboration. Any planned development is, by law, required to be passed by one of the planning authorities - be it a structural modification to a private dwelling or the construction of a marina. Private planning is largely incremental in form. This can induce planning at the higher level to follow suit, particularly where potential economic rewards promise to justify a deviation from established public strategies. Thus, to ensure effective planning, attention needs to be paid to seemingly trivial detail, as it is these often modest sources that cause serious problems for integrated planning and control.

4.3 PERCEIVED PROBLEMS FACING FALSE BAY

A summary of interviews held with representatives of various bodies involved in, or affected by, the current management of False Bay appears on page 127 in the Appendix. These interviews, in conjunction with personal observations, provide the basis for an exposition of the problems facing False Bay.

Some confusion may occur over the distinction between the problems themselves, their causes and manifestations. The underlying problem being the demands for finite resources. These demands and resources have been outlined

in Chapter 3. The competition for limited resources by an ever increasing population with increasing affluence and expectations can often not be avoided, irrespective of the system employed to allocate and control the utilization of the resources. Diversion or reduction of these pressures can only be achieved through concerted political, social and economic efforts.

The following shortcomings have been identified as existing within the current administrative structure. Each problem is briefly described and practical examples are given as illustrations.

1. Too many planning authorities with too little co-ordination

Each of the four levels involved in planning is, for example, involved in the identification and delineation of recreational and conservation areas. An area such as the Zeekoevlei-Rondevlei wetlands has received the attention of the Cape Town Municipality, Cape Divisional Council, the Metropolitan Planning through a Guide Plan Committee, as well as the Department of Community Development. Although some liaison has taken place, plans for the development of the area are being prepared independently by all bodies.

2. Planning authorities have an unsatisfactorily low status

At all levels it appears that even where the various planning bodies have cautioned against a particular development, political and economic pressures have superceded the recommendations of planners.

The Cape Metropolitan Planning Committee has no executive

powers and has the legal status of a local authority. This means that it has a status no higher than its constituent members.

3. Bad or incomprehensible planning

The criteria for establishing the "Need and Desirability" for developments are viewed as being insufficient assurance that ecologically sensitive areas are afforded adequate protection. The factors that are employed to determine the economic feasibility of development schemes such as townships are listed in Table 4.3 on page 139 in the Appendix.

4. There is a lack of planning and control goals and aims

Short term objectives are generally satisfied by ad hoc implementation of plans and policies. Central issues such as the determination of carrying capacities and the overall suitability of actions are often not perceived in an overall context.

Whereas the pelagic fishing tolerated in the Bay may not exceed a sustainable yield, it does cause a significant impact on sport fishing which may be the best form or utilization of the marine resources. Similarly, the Marine Oil Refinery in Simonstown degrades an environment most suited for recreation and tourism.

A "blueprint" for the further physical development and promotion of resource use has been called for by a number of organisations. This would determine the most suitable resource use and provide a clear management goal for all parts of the Bay.

5. Consultation and collaboration between management agencies and other agencies is deficient

Except where regulations dictate, consultation between the planning or control authorities and other public or private bodies which may be equipped to assist such authorities is generally limited.

6. Planning regions are not defined on the most important considerations

The subdivision of the country into planning regions is not based on ecological criteria. Cadastral, magisterial, divisional council or other administrative or even ad hoc boundaries are used to demarcate planning regions. In the case of False Bay local authority jurisdiction ceases at the High Water Mark if it has a sea boundary and at an arbitarily determined border inland. Similarly the Metropolitan Planning Committee has adopted magisterial districts as the building blocks on which local authority boundaries are laid.

The adoption of watershed or catchments as the ecological parameters for boundary definition has been discussed in the introduction and offers the best alternative to criteria currently employed.

7. Local authorities lack the expertise and/or finance and/or continuity to effect integrated resource management

The continued existence of small municipalities such as Fish Hoek and Gordons Bay has been quesitoned in various circles because of their poor financial and personnel status. Revenue generated within their boundaries is often too low

for small local authorities to engage in any more than the most basic tasks. Many such local authorities are reluctant to accept direct state subsidy for fear of manipulation, yet they recognise the urgent need for assistance in certain fields - particularly the provision of beach facilities which are enjoyed by all, and tackling conservation problems such as alien vegetation or the improvement of degraded areas. The lack of adequate personnel and expertise to manage the local areas is directly related to the shortage of funds.

Frequent interruptions in continuity of policy formulation and implementation as a result of the process of electing office bearers may also hinder long or medium term planning.

8. Duplication of administrative, technical and professional functions

Closely related to numbers 1 and 7 above, this structurally induced hinderance to optimal utilization of human resources can only be alleviated by extensive amalgamation of functions. Many of the functions which are currently performed by one local authority are unnecessarily duplicated by another because of the legal and administrative complications involved in "pooling" resources.

9. Excessive state involvement

From the provincial level down, all the interviewees took strong exeption to increasing centralization. The imposition of government policy, such as group area zonation, and the state's take-over of certain functions that have traditionally been provincial, or local authority responsibilities, are seen as being real impediments to effective provincial, regional and local government.

10. Too little state involvement

The response of the state employees that were interviewed, emphasised a need for further centralization, albeit centralization of policy and decentralization of implementation. State control was seen as a panacea for the ills of the resource starved local and provincial authorities.

11. Poor implementation of policy

In so far as environmental conservation within the False Bay region is concerned, this shortcoming is possibly the most serious. From central government down, implementation of legislation appears to be poor. Much of this deficiency of control is a result of the personnel composition of the responsible agencies. The absence of "ground level" inspectors in the Department of Community Development makes the apprehension of transgressors of the Sea Shore Act impractical. So, too, shore-stranded Sea Fisheries inspectors pose little deterrent to offending boat fishermen.

Legal restraints, prohibiting officers of one department (such as foresters in the Directorate of Forestry) from assisting others, (such as Sea Fisheries Officers), restrict mutual reinforcement.

Apart from the legal, financial and administrative restraints that impair effective implementation of policy, poor job motivation can also be regarded as an element retarding the enforcement of the imperfect but substantial body of laws and regulations that exist for the management of the Bay.

A brief summary of evidence of environmental degradation,

largely as a result of the deficiencies listed above, appears in the Appendix on page 141.

ANALYSIS OF THE CHANGES NEEDED TO PROMOTE THE INTEGRATED MANAGEMENT OF FALSE BAY

The physical and social context of False Bay has been examined and certain deficiencies in the currently employed planning and control measures identified. Methods for improvement are now analysed.

As has been emphasised before, this paper does not attempt to stipulate how the Bay is to be managed, but rather what administrative mechanism should be adopted to realise the management imperative. The distinction between the terms "administration" and "management" has been clarified in the first chapter.

The criticisms of the current management practices exercised in False Bay outlined in the previous chapter refer to both the form and efficiency of the administrative mechanism applied. In addition, they highlight the underlying deficiency in the present management of the area - namely a lack of commitment to holistic environmental decision taking and control. Before expanding on the form and efficiency aspects, this underlying shortcoming must be resolved.

The identification of remedial measures for any inadequate administration is entirely dependent upon the recognition of the purpose for which such a system was established. A uniform and well-defined purpose for the administration of an area controlled by a multiplicity of bodies with divided objectives, is unlikely to exist. In practice, the Sea Fisheries Institute, a government agency concerned almost exclusively with the management of commercial marine species can hardly be expected to assist with or even

recognise the importance of curbing river pollution - the responsibility of another government agency, the Department of Environment Affairs. In the case of local authorities exercising their delegated powers to control the sea shore, their involvement is often limited to the management of activities in or around popular beaches and the accompanying amenities.

As a result of this lack of unity of purpose, many actions evade adequate control. With the vast increase in the numbers, sophistication and mobility of the population many seemingly harmless pursuits such as off-road driving, hiking, camping and fishing may cause serious environmental degradation and discomfort for others.

The determination of a purpose for specific administrative action is, and undoubtably will always remain, the prerogative of the administrator and politician. This situation can only be compatible with sound resource management if the objective of their tasks is to integrate their actions and regulate exploitation rates on sound ecological principles.

The need for a management or organisational goal is lucidly illustrated in many contemporary works on Public Administration. The statement of a "sound clear and strong objective" is the first point mentioned by Blake and Mouton in their "Blueprint for Effectiveness" outlined in a chapter on "Grid Organisation Development".[1] This key element of efficient management is further emphasised by Blake and Mouton[2] when they assert that of the seven properties of an effective organisation, the "purpose"

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1. Shafritz, J.M.: A New World, p.200.
2. Ibid., p.200 (Shafritz's seven properties of an organisation are Purpose, Structure, Financial Resources, Know-how, Human Interaction, Organisational Culture and Results).

is first and foremost. Other writers such as White[3] have taken the public policy as the definition of purpose and as the departure point of all Public Administration. White[4] claims that Public Administration consists of "all those operations having for their purpose the fulfilment or enforcement of public policy". Luther Gulick[5], often referred to as the doyen of organisational theory, lists the purpose of the organisation as the most essential consideration in structuring its size, pattern and performance.

Thus the first change needed in the current system can be identified as being the adoption of a clear and comprehensive management objective by all controlling bodies involved in False Bay.

Turning now to the method of efficient implementation of such an objective, both the form and functioning of the mechanism employed must be analysed.

A division of the administrative functions into rigidly defined components is difficult to achieve as the very concept implies an interaction between physical, social, organisation, economic and other elements that are inextricably linked.

For the purpose of clarification, a distinction will be made between the structural and non-structural components of administration. Although hypothetical, such a division can assist in the analysis of change needed in two ways. Firstly, the structure or static constitution of the public institutions can be distinguished from the human related

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3. White, L.D.: Introduction to the Study of Public Administration.
4. Ibid., p.1.
5. Gulick, L.: Notes on Theory of Organisation.

functional or dynamic component. Secondly, the enigma of defining causes and effects of organisational inefficiency can be more readily resolved.

As the dysfunctions of any administration "... exist in contrast with Max Weber's perception of a bureaucracy as a rational system impersonal and professional"[6] it is imperative that administrators realise that these dysfunctions will not necessarily be rectified by structural manipulations alone. So, too, will the efforts of self-motivated personnel be frustrated by an organisational structure that stifles initiative, hampers lower level decision-taking and restricts cross pollination of ideas and integration of planning with other similar organisations. Chris Argyris condemns the formal organisational structure that most state and quasi state agencies employ as making "demands of relatively healthy individuals that are incongruent with their needs. Frustration, conflict, failure and short-time perspective are predicted as results of this basic incongruency."[7] Luthans quotes William G. Scott's criticism of the classical structure of state bureaucracies to be neglecting of "the interplay of individual personality, informal groups ... and intraorganisational conflicts ..."[8] It would appear that although treated separately in this paper, these structural and non-structural components are not mutually exclusive. Attention must therefore be paid to both.

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6. Self, P.: Administrative Theories and Politics, p.32.
7. Argyris, C.: Personality and Organistion, p.74.
8. Luthans, F.: Op.cit., p.132.

STRUCTURAL CHANGES TO THE PRESENT SYSTEM OF MANAGEMENT

This component has three major elements; legal competence, formal organisational structure and fixed processes or activities. These elements will be briefly outlined prior to a presentation of practical options.

6.1 MAJOR ELEMENTS

6.1.1 Legal Competence

By legal competence is meant the authority or politically sanctioned power of any public body responsible for playing a role in the public administration of the country or part thereof. In the context of this paper the law concerned is largely administrative - a part of our legal system S.A. de Smith[1] defines as being "... the law relating to the organisation, composition, functions and procedures of public authorities and special statutory tribunals, their impact on the citizen, and the legal restraints to which they are subject". Administrative law is almost exclusively statutory in origin and as such is to be traced from Acts of Parliament, Provincial Ordinances or local authority by-laws. Wiechers[2] does recognise other sources of legal rules emanating from common law, judicial precedent and administrative practice.

There are three considerations that determine the legal competence of the various options of structural change. They are:

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1. De Smith, S.A.: Constitutional and Administrative Law, p.527.
2. Wiechers, M.: Administratiefreg, p.356.

1. From what legislative organ does the authority or power emanate?
2. Can powers be exercised directly?
3. What is the scope of such power?

The first consideration refers to the level of the enabling legislative body in the framework of the South African Westminster system. This framework has been briefly described in Chapter Four.

In certain cases management bodies do not have executive powers, i.e. the authority to enforce their policies directly and independently. Certain bodies are merely advisory, such as the Subsidiary Committee for the Coastal Zone - a planning advisory committee of the Office of the Prime Minister. Certain bodies such as the Lake Areas Development Board have executive powers, defined by their enabling legislation, and provided they do not act ultra vires, they may exercise this authority without the necessary sanction of any other superior body.

The scope of authority is defined in the legislation that confers the authority. This scope can be limited geographically or functionally. The focus of power refers to the element of the administrative practice that can be or is most readily influenced by a management body. Where the scope of power is restricted, the effective focus of the power is of vital importance in order to realise the management objectives.

The optimum level of legal competence that needs to be conferred on a management body responsible for the planning and control of False Bay would be attained if the following conditions can be satisfied:

1. The management body would need to be empowered to enforce compliance with its policies and plans. The classical

administrative principle is that authority must match responsibility, and

2. The legal powers conferred on an agency must enjoy practical adherence.

6.1.2 Formal Organisational Structure

Formal organisational structures have been the subject of hot debate in political, administrative, business as well as religious and military circles since time immemorial. The anlysis of concepts such as centralisation versus de-centralisation, democracy and power-sharing or bureaucracy is often wrought with semantic difficulties, as each such term has "strong emotive overtones and elusive connotations"[3] Each concept, such as the Webian model of bureaucracy[4] is proposed by its advocates or antagonists as an "ideal type". Few such pristine concepts can be witnessed in practice and our organisations, whether public or private, generally indicate the transfusion of a multitude of theories and practices into some basic framework. Of the many considerations that could be reviewed only the following four major ones will be related to False Bay. These are career systems, delegation of function, organisational size and span of control.

Career Systems

There exist two extreme types of career systems in the public services - the open career and the closed career types. The South African civil service has traditionally

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3. Albrow, M.: Bureaucracy, p.13.
4. Weber believed that the bureaucratic structure, outlined in his work "Essays in Sociology" provided the basis of a hypothetically rational and effective organisation.

been a closed career system, characterised by its separation from the other sectors, mainly private. Personnel recruitment is generally undertaken exclusively at the lower or lowest ranks and higher positions are filled by promotion of subordinates or from within the service. Training is largely undertaken within the organisation after appointment. Tenure of office is guaranteed in a closed career system and the dismissal of employees is only possible if a breach of conduct can be proven or if the employee is convicted of a disqualifying offence. Although, as has been mentioned above, no system is an absolute replica of the ideal type, the organs of government, be they national, provincial or local, comply closely to this closed career model. The adoption of the reciprocal - the open career system - will not assure the alleviation of all related problems, but certain shortcomings, listed below, may be rectified if more flexibility within the system is allowed. The table overleaf is a summary of the major characteristics of the open and closed career systems as it appears in Caiden's[5] work on the dynamics of public administration.

All of the characteristics tabulated overleaf would have a bearing on the False Bay situation, even if they may appear remote, as all three tiers of government have adopted the "closed career" system.

As tenure is guaranteed, many incumbents retain senior positions at the expense of more competent employees. From the interviews undertaken in researching this paper, there have been indications that many of the managers have retained the traditional philosophies related to organisational structures. Security of tenure is closely associated with the promotion criterion, which, in a closed system, recognises advancement through seniority rather than competence.

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5. Caiden, G.: The Dynamics of Public Administration, p.209.

Table 6.1: Open and Closed Career Systems in the Public Service.

	Open Career System	Closed Career System
Tenure	Discretionary	Guaranteed
Structure	Integrated	Differentiated
Classification	Position	Rank
Recruitment	All levels	Base level only
Entry qualifications	Job performance	General education
Salary scales	Short, overlapping	Long, separated
Training	External	Internal on-the-job
Promotion	Open	Closed
Promotion criterion	Most competent	Senior competent
Staff relations	Business like	Paternal
Retirement	Contributory pension	Non-contributory pension

Although it can be argued that experience in any position enhances stability, the protagonists of a more open system would counter such a claim and would assert that factors such as mentioned above serve merely to promote inertia and stagnation.

This limited coverage of this important aspect can only serve to illustrate the need to examine every aspect of the formal structure in an attempt to rectify administrative bottlenecks. Lawrence Peter aptly quotes Thomas J. Watson in his condemnation of organisational inertia, by recognising the "silent generation, more concerned with security than integrity, with conforming than performing, with imitating than creating ..." Where innovative leadership is demanded, the stubborn retention of the status quo for the sake of convenience and expedience must be challenged.

6.1.2.2 Delegation of Function

Of primary importance to the determination of what administrative mechanism is to be applied to manage False Bay is whether control is to be centralised or decentralised. Both are vague terms, but the following two considerations would assist in defining what is meant by the terms, and their implications to the case under study.

1. There is a territorial or geographical element of the two ideas. This pertains to the physical location of the administrative authority.

2. There is a functional element to centralisation and decentralisation. This refers to the scope of activities.

For example, if a single local management authority is established to manage False Bay it may be functionally and geographically centralised with its staff under one roof performing all the necessary functions for the whole area. However, this concept is also relative, as if a National Body with statutory powers were to assume responsibility for the management of False Bay, it would presumably have a national policy relating to the management of all such areas as well as a central head office. A distinction must, at this stage, be made between centralisation and integration of functions. Centralisation cannot occur without integration as the objective of centralisation is to rationalise policies and executions in order to eliminate overlaps, omissions and discrepancies. Policies and actions can be integrated without either geographical or functional centralisation as independent agencies can conform to a common management objective and act accordingly without amalgamating their administrations or sacrificing their independent identity. This does depend on the co-operation between the agencies involved if legislation does not compel compliance.

Neither centralisation nor decentralisation can be stereotyped as being good or bad. As Albers states, "In recent years, decentralisation has become the golden calf of management philosophy. It has been lauded by such terms as 'more democratic', a 'step toward world peace', 'greater freedom of spirit' and less authoritarian.[6] These claims implicitly imply that centralisation promotes the opposite qualities. Such an assumption would not only be simplistic, but also disturbing in the light of the government's attempts at streamlining the civil service through its Rationalisation programme. Personal experience, substantiated to a large extent by interviews with civil servants, has indicated that the rationalisation of the civil service has created a series of monolithic amalgamations of vaguely similar functions. This action has tended to increase delays, complicate elementary processes and has heightened the sensitivities of the departments that have been "taken over". However the fault may not lie in the practice of centralisation itself. Factors such as the procedures adopted and competence of initiators play an important role in making any such reforms succeed. Sharpe claims that decentralisation may well produce a "devolved government, willing to listen to the local population, but unable to do much about most of their demands".[7] Our task is then to find a system that provides avenues for local representation as well as the authority to enforce its decisions. Those people interviewed by the author, who believed that in the False Bay context, the state had already become too involved, expressed three of the most fundamental criticisms of centralisation. These are:

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6. Albers, H.: Principles of Management, p.186.
7. Sharpe, L.J. (ed.): Decentralist Trends in Western Democracies, p.3.

1. A fear of insensitivity and remote concern, if not disinterest in removed parochial issues. Certain local authority matters such as the regulation of dogs on beaches or the provision of playgrounds may appear trivial to a central national body, whereas they may be of urgent local concern.

2. The inability of the state or higher authority to deal with thorny issues with which the local bodies are forced to contend. The informal or "squatter" housing problem is an apt example of the centralised authorities' inability to resolve issues better than the decentralised local bodies. In his work on modern political theory, Joad summarises this reservation of centralisation by asserting that, "... in practice, the state is a collection of officials and inspectors, sometimes wise, sometimes foolish, with no more omniscience than the individuals they propose to coerce".[8]

3. One policy, with dictated procedural patterns for execution, may not be implementable for the whole country or coastline, owing to local differences in physical, social and economic conditions. The specific management objectives applicable to the planning and control of stretches of the western coastline would differ considerably from those objectives necessary for the sound management of False Bay and with its complex social interactions and demands.

What, then, can the distinct advantages of centralisation be? To False Bay, a centralised authority would promise four basic advantages. The fulfilment of such promises, as has been noted previously, is not always guaranteed. These advantages are:

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8. Joad, C.: Introduction to Modern Political Theory, p.29.

1. Co-ordination of policies and activities relating to the management of common human and biophysical resources. A greater ability to affect holistic management.

2. More substantial legislative powers.

3. Access to greater, in quantity if not quality, resources - logistic, financial and human.

4. Greater continuity and hence improved efficiency in the management effort.

All factors considered, the degree of centralisation will be concluded by the situation and the efficacy of decision taking. Newman, Summer and Warren suggest seven questions that need to be considered in determining the optimum degree of centralisation. These are:

1. Who knows the facts on which the decision will be based, or who can get them together most readily?

2. Who has the capacity to make sound decisions?

3. Must speedy, on-the-spot decisions be made to meet local conditions?

4. Must the local activity be carefully co-ordinated with other activities?

5. How significant is the decision?

6. How busy are the ... (decision takers) ... who might be assigned planning tasks?

7. Will initiative and morale be significantly improved by decentralisation?[9]

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9. Newman, W.; Summer, C. and Warren, E.: The Process of Management, pp.72-74 from Luthans, F.: Organisational Behaviour, Op.cit., p.136.

An attempt will be made in the following chapters to examine the possibility of centralising policy but decentralising its execution or implementation.

.1.2.3 Organisational Size

This element of formal organisational structures is perhaps the most often referred to cause of institutional inefficiency and apathy. State bureaucracies are regularly condemned as being vast amorphous masses of individuals that, through sheer weight of numbers, cannot be adequately controlled or guided. Such criticisms are gross oversimplifications as the adherence to sound organisation management principles could ensure faultless functioning within even the largest public or private concerns.

.1.2.4 Span of Control

This element of the formal structure is closely linked to the delegation of authority, but it refers more directly to the intra-organisational rather than inter-organisational structures. The term was coined by the "classical theorists" and refers to the limitation of numbers of immediate managerial, administrative or practical contacts a person can be expected to handle. Luther Gulick, himself a clasicist, refrained from attaching precise numbers to the optimum span as did others in his time, and emphasised that the number is determined as much by the nature of the executive as the nature of the work. He asserted that the "number of immediate subordinates in a large, diversified and dispersed organisation must be even less than in a homogeneous and unified organisation to achieve the same measure of co-ordination".[10]

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10. Gulick, L.: Notes on the Theory of Organisation Perspectives on Public Bureaucracy, quoted in Luthans, Op.cit., p.27.

Those organisations which have very small or limited spans of control are referred to as tall structures. Most state departments and other governmental agencies fall into this category. A flat structure has large or wide spans of control.

In brief the principle advantage of a tall structure is seen to be the closer control over subordinates the upper management may have. As a result of this closer control, decision taking is far less diffused and responsibilities for management rest at the higher levels of the hierarchy. The post classical and "behaviouralist" administration theorists have rejected absolute limits to the "span of control" and have advocated that "closer" control is not necessarily better control. A flat structure, in converse, would promote more diffused decision taking, promote worker responsibility and facilitate decentralisation. McGregor claims that the advocates of tall structures place a serious indictment on subordinate workers by assuming that

"1. the average human being has an inherent dislike of work and will avoid it if he can;
2. because of this human characteristic of dislike of work most people must be coerced, controlled, directed, threatened with punishment to get them to put forth adequate effort toward the achievement of organisational objectives, and
3. that the average human being prefers to be directed, wishes to avoid responsibility, has relatively little ambition, wants security above all."[11]

It is the firm belief of the author that the denial of worker responsibility, the presumption of worker incompetence and the rigid chain of command that is prevalent

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11. McGregor, D.: The Human Side of Enterprise, pp.33-34.

in all levels of formal organisational structures in government, are serious shortcomings in our present administrative mechanisms.

In no way can one presume that the adoption of novel formal structures will automatically provide the ideal mechanism for the attainment of the management objectives. Any theory needs to be put to the test, and for this reason two administrative options are described below as possible alternatives to the status quo. As the exact details of any system's constitution and functioning are often determined by the incumbents of responsible positions, a minute analysis will not be undertaken. Each option will be outlined in the light of its legal competence, formal structure and fixed process and the likely advantages and disadvantages of each will be briefly noted.

6.2 A SINGLE MANAGEMENT BOARD

A popular response to solving multi-jurisdictional management problems is to envisage a single controlling agency with the specific task of co-ordinating the planning and control exercised by the numerous existing management agencies. The formulation of such a board was mooted during the closing stages of the symposium on the management of False Bay in 1980, but no specific recommendations were forthcoming.

Two cases that have particular relevance to the False Bay situation are the proposed Table Mountain and Southern Peninsula Mountain Chain Management Authority and the Lake Areas Development Board. An exposé of these two cases would assist in assessing what existing legislation could be applied in False Bay.

Largely as a result of the 1978 report of the commission to investigate the "Future control and management of Table

Mountain and the Southern Peninsula Mountain Chain"[12] an Interim Management Committee was established during mid 1980 by the Minister of Environmental Planning and Energy. The terms of reference for this committee are:

1. to make recommendations for the cadastral boundary of the area that would be proclaimed a nature area in terms of Section 4 of the Physical Planning Act No. 88 of 1967,

2. to draw up a broad preliminary management plan for the area,

3. to make recommendations regarding the financial arrangements that affect the management of the area, and

4. to propose an agency to be responsible for the management of the area.

At the time of writing, the fourth task has yet to be completed as the determination of the status and composition of the management agency have been delayed because the enabling legislation, the Environment Conservation Bill, was referred to a select committee for detailed study.

Section 10 of the Bill provides for the establishment of statutory management committees to advise the Minister of Environment Affairs as to the management and development of an area once it is proclaimed a nature area. The Bill stipulates the composition, functions and workings of the envisaged statutory management bodies. A copy of Section 10 of the Bill appears on page 142 of the Appendix together with the definition of a "nature area" as well

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12. Report on the Future Control and Management of Table Mountain and the Southern Peninsula Mountain Chain, 1978, D. Hey, DCS, Commissioner.

as Section 4 of the Physical Planning Act No. 88 of 1967.

When enacted, the Environmental Conservation Bill will enable the management authority, appointed by the Minister of Environment Affairs, to manage the area in accordance with the management principles accepted by the Minister and subject to permit authority by the Minister for any change in land use or rights. Existing land uses will be recognised, but the act overrides all rights conferred but not exercised. Therefore, although the land involved is not alienated in any way and no provision is made in either the Environmental Conservation Bill or Physical Planning Act No. 88 of 1967 for compensation, the Minister may, through the management committee, deprive landowners of certain existing rights and may impose restrictions upon the use of land without compulsion or, even legal capacity to remunerate for the owners' loss of amenity. This characteristic of the legal competence of the Minister and management agency may well facilitate management and eliminate expropriation costs for the state, but it may well be seen as an infringement of basic property rights and is undoubtably not in accord with the intentions of the Expropriation Act No. 63 of 1975.

The formal structure of the management agency would need to comply with Section 10 of the Environmental Conservation Act, when passed, subject to the discretion of the Minister. Representatives from the following would form the membership of such a committee.

The most important aspects of the formal structure are:

1. Provision is made for non civil servants to serve on the management board. This enables specialists from outside the state, provincial or local administrations to be incorporated in the decision taking processes.

2. The management agency need not be dominated or even

administered by the Department of Environment Affairs. The Chair may be held by a non partisan person or by an official from the provincial or one of the local authorities. Thus despite having its enabling powers granted through national legislation, the executive body may remain regional or even local in nature.

3. The management board may rely on the services of individuals or sections of involved agencies to provide for the technical, administrative, logistic or man-power requirements of the management board. In this way the size of the board can be significantly reduced and the membership of full-time staff may be restricted to a chairman, secretary and a small number of administrative assistants, remunerated by the Department.

The fixed processes or activities of such a board are clearly defined in Section 10 of the Environmental Conservation Bill as being to advise the Minister as to the management and development of that nature area. In practice, it would appear that the board would perform three primary functions:

1. Draw up a detailed management plan for the area.

2. From the funds made available from the local, provincial and state authorities, allocate money to projects designed to implement the management plan.

3. Direct and co-ordinate the activities of all involved parties on all matters related to the management plan.

Further activities would be determined in response to particular demands made.

The diagram below provides one possible structure of the management authority for the proposed Table Mountain and Southern Peninsula Mountain Chain Nature area.

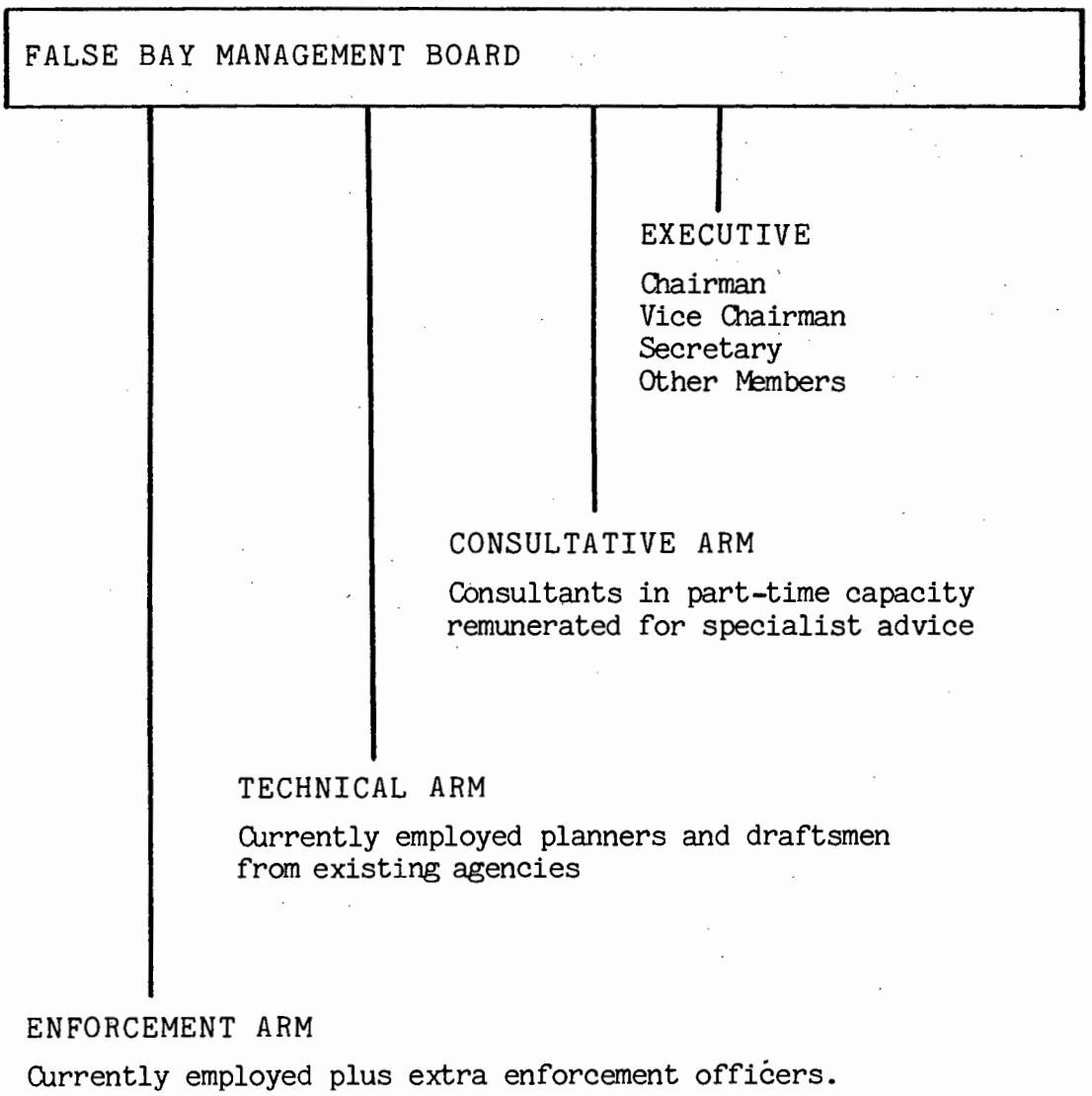

FIGURE 6.1: The Composition of the Proposed False Bay Management Board.

A single management board modelled on the proposed Table Mountain and Southern Peninsula Mountain Chain nature area management authority would have the following advantages:

1. In terms of the enabling legislation, the board could advise the minister to make regulations to implement an integrated management policy for False Bay catchment or whatever the defined boundary may be.

2. All existing management authorities would retain their current jurisdictions and responsibilities while the future exercise of rights and uses would be subject to further sanction.

3. The basic purpose of the board would need to have a multiple nature, but special emphasis would be paid on the conservation of the area's natural resources.

4. Much needed finance could be forthcoming from the state to provide for services that are hitherto inadequate. The board may well be empowered to provide a local "environmental constabulary" to patrol beaches, protect resources and assist in other civil functions.

5. The local level management option could promote greater involvement as it is largely community orientated and thus should be more responsive to public participation.

Despite the attractiveness of this option, several serious shortcomings are evident in such a single management approach. These include:

1. The False Bay waterbody and catchment cannot be considered a "nature area" in terms of the Physical Planning Act No. 88 of 1967. As has been outlined in previous chapters, False Bay is the setting for practically every type of human activity. Although a single

management authority may be contemplated, it is not feasible under Section 4(b) of the abovementioned Act.

2. Although established to co-ordinate control in the area, such a management board would be unlikely to be able to influence all decisions taken in the area. A severe problem would be the limiting of responsibility by such a board, as state departments such as Defence and Transport Affairs would be likely to be overruled by such an authority.

3. In many cases, the management authority may merely become yet another planning and control body. As the functions and responsibilities of all the local, provincial and various state authorities are to remain in force in addition to the newly established management board, planning and control may be further duplicated and complicated rather than rationalised.

4. If established, such a management board would have to operate in conjunction with the proposed Table Mountain and Southern Peninsula Mountain Chain and the Rooi Els nature areas.[13] Both these proposed areas include large tracts of land falling within the area under study, but they also include large tracts of land beyond the catchment. A significant complication would occur in the management of those sections which overlap into two nature areas. If a fusion of all three is ever considered - a most unlikely thought - the total area would be of too great a magnitude and complexity to be managed as a single nature area.

5. The number of representatives of involved bodies is likely to be large, thus making the management board potentially

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13. Both the areas are being investigated as being potential nature areas by the Department of Environment Affairs.

unwieldy and the decision taking long and involved.

6. In terms of the Physical Planning Act No. 88 of 1967, the Minister of Environment Affairs is empowered to regulate the future exercising of rights and uses in a nature area. Many of the current management problems exist within a framework of zonings and practices that would be beyond the scope of jurisdiction for the Minister to alter. The rezoning of existing industrial or mining sites, for example, is most unlikely to be contemplated under the Physical Planning Act.

Although provision is made in the Physical Planning Act for the state to provide additional funding for such a single management authority to assist the local authorities in their management effort, experience from the proposed Table Mountain nature area negotiations has indicated that no state funding has to date been forthcoming. As many management difficulties can be resolved or significantly alleviated through the injection of further financial support into the individual or collective management effort, the support or lack thereof from state coffers must play a decisive role in the consideration of alternative controls for such an area.

It should then be apparent that this first option would not be a viable alternative to the present administrative system without significant modifications. These modifications would be unlikely to be accommodated under the present legislation regulating the management of nature areas. An alternative type of single management authority that may be applied to the False Bay area could be modelled on the Lake Areas Development Board.

The Lake Areas Development Board is an existing statutory body within the ministry of Environment Affairs and is constituted to control, manage and develop any land situated

within any lake area proclaimed in terms of Section 17 of the Lake Areas Development Act No. 39 of 1975.[14] (To date only one area, the Wilderness Lakes Area has been proclaimed, although it is the intention of the board to expand throughout the country.)[15]

A lake area is defined by the Act as being "any land comprising or adjoining a tidal lagoon, a tidal river or any part thereof, or any other land comprising or adjoining a natural lake or a river or any part thereof, which is within the immediate vicinity of a tidal lagoon or a tidal river"[16] that is declared to be a lake area in terms of the Act.

As with a "nature area" the False Bay waterbody and catchment cannot be regarded as a "lake area" in terms of the abovementioned definition and as such is unlikely to be considered by the Lake Areas Development Board as a potential area to which it could extend its influence. There are, however, a number of features of the Lake Areas Development Board that warrant brief attention.

Firstly, the Lake Areas Development Act No. 39 of 1975 vests extensive powers in the statutory board, enabling it to act independently and free of the restrictions imposed by statutes or ordinances such as the Sea Shore Act and the Sea Fisheries Act as well as the provincial ordinances and local by-laws. Although the total area proclaimed "The Wilderness Lake Area" has not yet been bought out by the Board, the Act makes provision for expropriation of land as well as other compensation for loss of amenities or property rights.

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14. Section 11 of the Act.
15. Personal communication with the current chairman, Mr. G.A. Visser.
16. Lake Areas Development Act No. 39 of 1975.

Secondly, the Board is small (with not fewer than four and not more than seven members). It is financially largely autonomous, and may hire and fire staff as it sees fit. The Board does receive a grant from central government and is thus answerable to the Minister for its financial matters, although a significant portion of its revenue is self-generated.

Thirdly, although presently restricted to the one existing Lake Area, the Board is empowered to extend its influence to any area within the Republic. It is as a result of its nation-wide scope of legal competence, able to act as a centralised authority for any inland or coastal waterbody and adjoining land.

The most important contribution the Lake Area Development Board and its enabling legislation can make to the management of the False Bay area, is to provide a framework on which relevant statutory legislation can be based for a centralised coastal zone management policy.

Before cnsidering an extreme centralised response to the problems of local coastal zone management, justifications for not debating the intermediate approach - that of establishing a regional authority - need to be advanced.

A regional authority would involve a number of local authorities yet remain subordinate, in size and scope, to the provincial authority. The Cape Metropolitan Area, outlined in Chapter Four is an example of a region, and would serve adequately as a basis for the establishment of a regional authority to manage False Bay and the balance of the Western Cape coastline and catchments. There are, however, four reasons why this option is not pursued further in this paper, despite the claim by the Director of the Cape Metropolitan Planning Committee that such an authority would make an

important contribution to planning and management in the country.[17]

Firstly, such an authority would have to be established in addition to the existing three tiers of government as it would not be a viable substitute for any of these levels. The creation of a fourth tier of government will frustrate attempts to improve co-ordination and rationalisation of management and control.

Secondly, even if the currently debated constitutional changes to the Westminister system of government were to advance, and a "confederation" promoted further the forty-two National Physical Development Plan planning regions are unlikely to be adopted as the "states". The white regions together with the various "independent black national states" would number more than fifty, in toto, and would be far too numerous to be a viable middle tier of government. The newly created "states" would most probably each consist of a number of regions with little more than three such states per existing province.

Thirdly, the current planning regions are not defined primarily along ecological considerations,[18] and it is the contention of the author that river catchments should provide the baseline for the definition of planning entities. In the case of the Cape Metropolitan area, planning region number thirty nine of the National Physical Development Plan, the whole of the False Bay catchment is not covered.

Finally, a regional authority would have a significantly inferior legal status than the provincial and national

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17. Personal communication with Dr. B. van Zyl, March, 1981.
18. Cape Metropolitan Area Draft Guide Plan, Op.cit., p.i.

authorities. As such it would be unable to assert plans and policies that may be necessary for sound management, over the higher level agencies - a major hinderance in the current planning and management mechanism.

Although the adoption of a regional authority may be impractical, the adherence to the principle of decentralisation of policy implementation necessitates regional if not local management. A solution to this dilemma is offered in the recommendations.

6.2 A NATIONAL COASTAL ZONE MANAGEMENT AUTHORITY

Only a very brief exposition of this option will be offered as it calls for an extreme case of centralisation which would demand radical changes to the current governmental arrangements and the concomitant disturbance of departmental power bases. A discussion of these complexities falls beyond the bounds of this paper.

A centralised coastal zone management authority would entail the following key elements.

6.2.1 Rationalised Legislation

All legislation pertaining to the coastal zone would need to be rationalised into a single act.

6.2.2 The Creation of an Executive Agency

Either a statutory body would need to be created to administer the act or an existing state department would need to have this responsibility delegated to it. Whichever alternative is selected, the executive agency would

require extensive powers over other state, provincial and local authorities.

6.2.3 The Satisfaction of Administrative Requirements

Adequate provision would need to be made for the transference of existing human, logistic and financial resources from the currently controlling agencies to the centralised body. Additional resources would need to be acquired to eliminate the present shortfall in these areas.

6.2.4 The Establishment of Local or Regional Offices

In addition to the head office of the authority certain regional or local offices would need to be established to perform detailed planning and exercise control.

The existence of such a centralised management authority may facilitate the co-ordination of planning and the enforcement of policy, but four serious impediments militate against the adoption of this option. These are:

6.2.5 The Difficulty in Rationalising the Legislation Pertaining to the Coastal Zone

The summary of legislation that appears in Table 4.1 gives at a glance the plethora of merely the major laws regulating activities within the coastal zone. Although some degree of codification is desirable and practical, the creation of one law regulating all activities would be impossible. The clear determination of the geographical scope as well as the legal scope of direct control of such a centralised authority would be an insuperable task.

6.2.6 The Political Unacceptability of such an Authority

The creation of one authority to assume control over such a wide diversity of activities would be politically unacceptable from the national down to local authority level. The ability of any one authority to efficiently handle all aspects of coastal zone management would be justifiably questioned. Any surrendering of power from one agency to another will invariably be met with opposition from the forfeiting body.

6.2.7 Unmanageable Size of the Centralised Authority

The assumption of such a vast number of functions would demand the creation of a monolithic organisation if the execution of tasks was not delegated to existing authorities - an action that would in part negate the object of the establishment of such a centralised body. The existence of regional or local offices would enable a degree of decentralisation of execution, but would not eliminate the problems associated with the administration of large organisations.

6.2.8 The Cost of Implementing the Necessary Changes

Such radical changes would involve additional costs above the present expenditure on coastal zone management. As the lack of adequate funds for the present needs is a major obstacle to efficient management at all levels of government, unless a considerable injection of finance from hitherto untapped sources accompanied the changes, many, if not all, the aspects of coastal zone management may suffer from further financial shortage.

In conclusion, the structural changes to the present system of management could focus on the following objectives:

1. The establishment of a central, national coastal zone advisory body that can promote the co-ordination of integated and rational management,

2. the establishment of local or regional coastal zone advisory bodies that can be integrated into the existing mechanisms rather than the creation of other executive bodies at various levels.

3. the transference of certain areas and functions from non resource-management based departments to one which is constituted for that purpose.

The following chapter deals with the non-structural elements of the present system of management that should enjoy attention irrespective of the structural modifications.

NON-STRUCTURAL CHANGES TO THE PRESENT SYSTEM OF MANAGEMENT

Of Shafritz's[1] seven properties of an organisation or administrative mechanism, quoted on page 65 only two have been covered in the previous chapters, namely purpose and structure. Even if the optimum structural arrangements could be recognised and implemented, they per se would not necessarily ensure perfect administration. The remaining five elements that Shafritz identifies as ingredients for effectiveness - financial resources, know-how, human interaction, organisational code and results - concur with the three intra-organisational "processes" that Frohock identifies as being central to understanding organisational dysfunctions. Frohock describes these processes as being the social structure, the prevailing attitudes relating to the organisation's functions and the activity output.[2]

A detailed study of these aspects cannot be undertaken in this paper, but a number of salient points can be raised regarding the non-structural changes that would be necessary to ensure integrated resource management in the area under focus. The numerous elements that Frohock, Shafritz and other writers may name have been summed up under a simple "systems" approach which serves to illustrate the close interrelationship between the various organisational elements. As a prime mover of such a General Systems Approach to describe relationships of the empirical world, Kenneth Boulding saw the approach's goal as being " ... to reach a happy medium between the specific that has no meaning and

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1. Shafrity, J.M.: A New World: Readings on Modern Public Personnel Management.
2. Frohock, F.: Public Policy - Scope and Logic, p.149.

the general that has no content".[2] The key to any systems analysis lies in the recognition of four stages; an input stage, a process stage, an output stage and a feedback loop function. This is illustrated diagrammatically below:

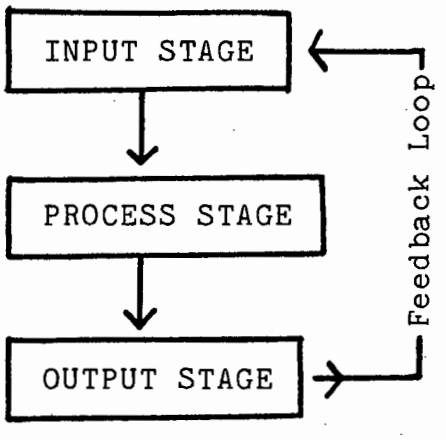

FIGURE 7.1: Systems Diagram.

Relating this model to the False Bay case, the following considerations can be listed under the various stages:

7.1 INPUT

Once the organisational goal is determined the first stage

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2. Boulding, K.: General Systems Theory: The Skeleton of Science, quoted in Luthans, Organisational Behaviour, Op.cit., p.75.

in the management process is to establish adequate input into the system to ensure the realisation of the output.

This input involves the acquisition of numerous resources, financial, legal, human, logistic and information. Of these, the financial resources are the most critical to secure, as many, if not all, the others may be procured if adequate funding exists. All funding has two dimensions - namely intra and inter organisational routes - that must be taken into account in the assessment of adequacy of financial support. The inter organisational routing of funds concerns the allocation of money between state, provincial or even local authorities. The vast discrepancy between the allocation of funds to conservation and other government functions is evident in this year's Budget. Defence expenditure is expected to be in the region of R2 668 000 000 for the 1982/3 financial year while the Branch of Environmental Conservation will control some twelve million rand for all aspects of environmental conservation at the state level. Little or no money is thus available from the state coffers to financially assist the existing organisations with conservation work such as the clearing of alien vegetation along Table Mountain and Southern Peninsula Mountain Chain, the upgrading of river environments and the funding of management related research. At a provincial level, the Department of Nature and Environmental Conservation, one of the five Cape Provincial departments, was allocated less than one per cent of the total provincial budget[3] for the 1979/80 financial year.

The intra-organisational allocation of funds plays an important role in the determination of the success of management objectives. Priorities within a management brief must receive the necessary financial support. The expenditure of large sums of money on high social status

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3. Cape Department of Nature Conservation and Museum Services, Report No. 36, 1979-80.

projects to the detriment of programmes essential for sound resource management must be guarded against. The construction of the multi-million rand luxury civic centre complex by the Cape Town Municipality and the R400 000 subsidisation of the Keep South Africa Tidy Litter Campaign by the Branch of Environmental Conservation are examples of misappropriation of critically limited funds at a time of extreme social and environmental financial demands.

The legal resource input into any organisation must be capable of ensuring adequate legislative backing for the execution of functions. Overlaps and omissions in statutes, ordinances and by-laws must be eliminated and recourse to the law must be readily available to all sectors of the population, to ensure effective enforcement. The summary of perceived environmental degradation on page **141** in the Appendix deals with the inadequacy of legislation and law-enforcement further.

Whereas the organisational structure determines positions within an organisation, the human resource element is concerned with the incumbent as well as the position he or she may fill. The welfare, motivation and value to the organisation of each employee within an organisation are among the many considerations that managers need to take into account in determining the human resource element of an organisation.

The logistic and technical resources include the physical implements which are required to perform any management task. Tools, be they computers or drawing boards, must be made available to a management body to facilitate execution of duties.

Sound empirical data and access to specialist knowledge should form the basis of any management policy. Most local authorities do not have the facilities to acquire or train staff to demand information on or related to the subject of

management. In order to exploit False Bay's resources and regulate the human activities the following basic knowledge must be secured:

1. The functioning of the natural system of the Bay and its catchment area,

2. the existing and future human demands on and needs with respect to the area, and

3. the impact of such demands and needs on the area.

7.2 PROCESS

This is a transformation stage through which the inputs must pass. There are two influences that affect this process - one formal and the other informal. The formal influence is determined by the formal organisation structure which has been covered in the previous chapter. The informal influences can play as important, if not more important, a role in transforming the inputs, as the formal structure. Behavioural studies have indicated that each formal component has an informal counterpart, thus emphasising the need for administrators to recognise the critical impact an informal leader or group may have on decision taking, the complexities of worker satisfaction and motivation methods and the external influences that provide an element of uncertainty to any rigid administrative mechanism.

7.3 OUTPUTS

The output stage involves the implementation of policies and plans that have been moulded in the previous stage. This implementation provides the results of the management

may promote better management in False Bay merely serves to illustrate that "rather than visualise the organisation in its traditional structural bureaucratic and hierarchical motif, with a fixed set of authority relationships much like the scaffolding of a building, we are beginning to view organisation as a set of flows, information, men, material and behaviour.[4]

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4. Stanley Young, Organisation as a Total System, quoted in Luthans, Op.cit., p.183.

RECOMMENDATIONS AND CONCLUSION

The deliberations in the previous chapters have precluded a simple solution to the intracacies of the management of False Bay. Guided by the following conclusions that have arisen from this study, a number of recommendations are proposed. As all the relevant issues have been debated at considerable length in the text, no further substantiation of these conclusions will be afforded at this stage. The conclusions are summarised thus:

1. No single management authority can be made responsible for the direct control of all activities within the False Bay waterbody and catchment area. This extreme centralisation of responsibility would be administratively not viable and politically unacceptable.

2. If a single management authority were instituted, the area under study would need to be restricted to the immediate shoreline and most closely associated components.

3. The underlying problems affecting the area essentially revolve around the degradation of the natural environment and the concommitant effect on the welfare of society, through certain management limitations. The emphasis of management must be directed towards sustainable resource utilisation, with special provision made for the preservation of critical environmental components and processes.

4. All planning and control must emanate from a positive management goal that clearly stipulates the agency's

responsibilities to sound resource management rather than a neutral open-ended management brief. At every level, planning needs to be integrated and holistic, with every concerned body consulted and drawn into the management task.

5. Various levels of involvement need to be employed by the single management agency in order to extend its influence over activities that fall beyond its direct control but which have a bearing on its function.

6. As a guiding principle for determining the optimal degree of rationalisation of functions, the practice of centralisation of broad policy and decentralisation of implementation is accepted.

7. The structure of any new administrative mechanism must be seen in its present and projected future context. The currently debated constitutional changes to South Africa's system of government have a direct bearing on the management structure for False Bay, as with any other local, regional or national situation.

8. Although the focus of this study has been directed at the False Bay waterbody and basin, this area is part of a larger management imperative. The following recommendations for the improvement of planning and control in this area are viewed as an element within a new administrative mechanism that needs to be adopted for the management of the whole of the South African coastal zone.

9. Particular cognisance should be taken of the non-structural elements of administration. The rectification of many shortcomings such as the lack of clarification of management goals, the inadequacy of funds

and the low level of inter-organisational co-operation could negate the need for substantial structural modifications to existing organisational arrangements.

10. The importance of a collective commitment to integrated resource management in order to enhance the quality of life for all peoples, within the natural sustainable limits of the Bay and its environs, cannot be over-emphasised. Petty political jealousies, preferential development rights, the frustration of public presentation in government processes and above all the stunted growth of a national or even local environmental ethic are amongst the many factors that have to be vigorously addressed to ensure the integrity of the management effort.

The following recommendations offer both short term and long term approaches through which this new dispensation can be achieved.

8.1 A SHORT-TERM APPROACH

This approach deals exclusively with False Bay and its catchment whereas the long-term approach involves the whole of the coastal zone. In addition, this phase can be accomplished without the necessary enactment of new legislation or modifications to existing administrative arrangements. The successful completion of this phase would provide a basis for the second, longer term phase.

The two parts to this initial phase are:

1. The establishment of an interim management committee, and

2. The drafting of a provisional management plan for False Bay.

The Establishment of an Interim Management Committee

This committee would be established by the Minister of Environment Affairs in conjunction with the Office of the Prime Minister. It would have a specific brief - namely to draft a provisional management plan for False Bay and its catchment area. The committee would be disbanded on completion of this task. The composition would be as follows:

1. A Chairman: This position could be filled from the private or public sector. The chairman would need to be an experienced and competent resource manager and administrator.

2. A Secretary: This position would be filled by a full time employee of the Department of Environmental Affairs or the office of the Prime Minister.

3. A representative from the following state departments nominated by the respective departments:

   3.1 The Office of the Prime Minister: Physical Planning Branch.

   3.2 The Department of Environment Affairs: Environmental Conservation Branch.

   3.3 The Department of Community Development.

   3.4 The Department of Agriculture and Fisheries.

4. A representative from the Department of Local Government of the Cape Provincial Administration: Town and Regional Planning Section.

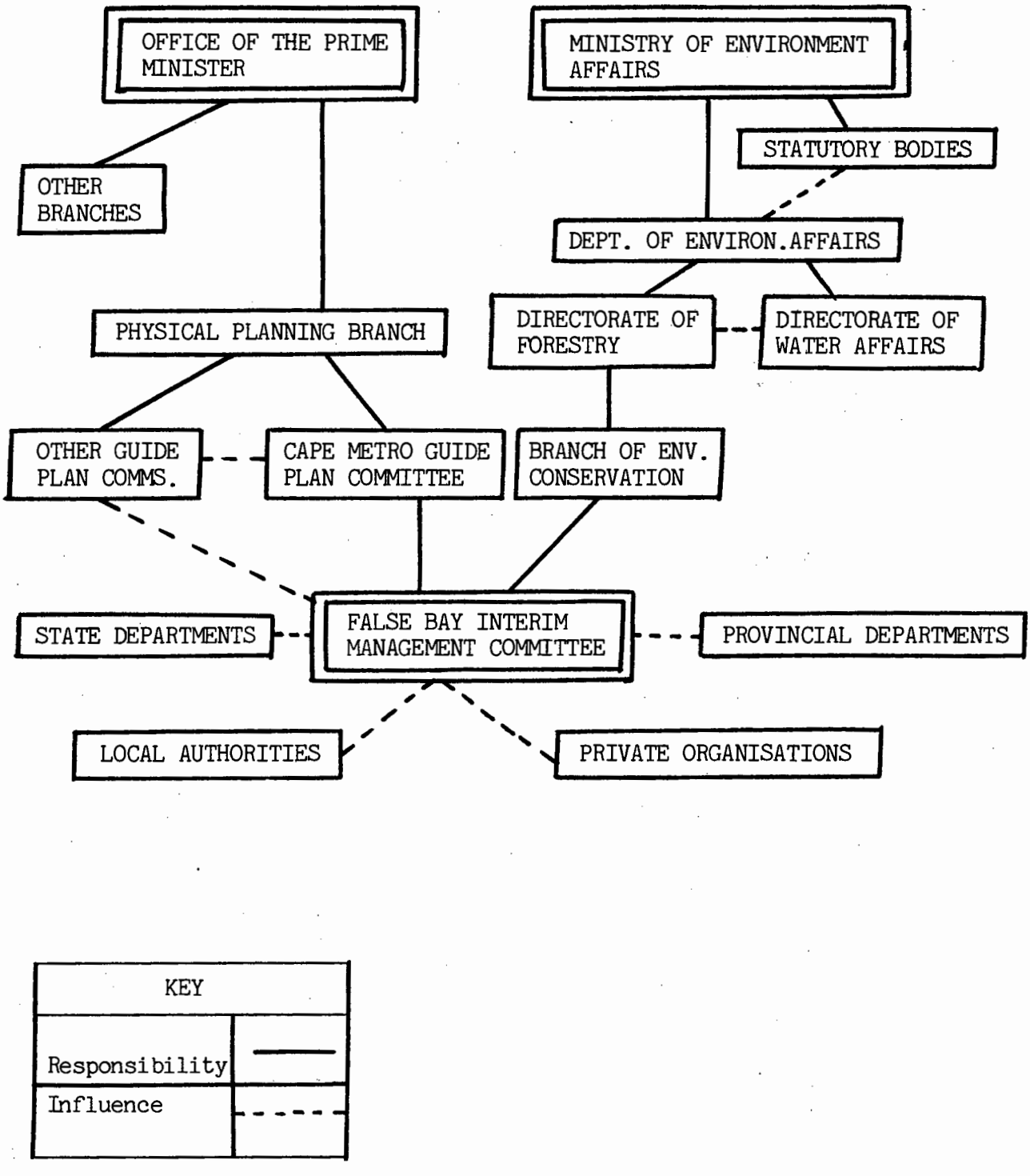

FIGURE 8.1: Flow of Responsibilities and Influences of Proposed Interim Management Committee.

5. A representative of the Cape Metropolitan Planning Committee.

6. A representative from the Chambers of Commerce and Industry.

7. A representative from a local body representing sporting interests (e.g. the Western Province Sport Association).

8. A representative from the Cape tourist industry (e.g. CAPTOUR).

9. A representative from the local conservation organisations in the Cape (e.g. The Co-ordinating Council for Nature Conservation of the Cape).

In addition to these members, temporary members could be co-opted to assist the committee. Private organisations or individuals would receive financial remuneration for expertise, time and information given.

The Drafting of a Provisional Management Plan for False Bay and its Catchment Area

There would be four major differences between this management plan and the draft guide plan for the Cape Metropolitan Area prepared by the Cape Metropolitan Planning Committee. These are:

1. The provisional management plan would not be confined to land use zoning as with the Metro guide plan. This management plan would involve itself in the determination of the optimal land and resource use and would need to make recommendations relating to the promotion or restriction of each activity within the defined area.

2. The geographical sphere of influence and concern would be the total False Bay region as defined in the first chapter of this paper, including the marine waterbody, the terrestrial waterbodies, the interface and basin. All agricultural land and the south-eastern fringe of the Bay from Gordons Bay to Cape Hangklip which have been omitted from the Cape Metropolitan Guide plan region, would be included in the management plan.

3. Private concerns, especially those involved in tourism, commerce, industry and recreation as well as conservation would be afforded direct representation on the committee and, as a result, a direct input into a management plan.

4. Whereas the land-use zoning determined by the Cape Metropolitan Guide Plan committee would be statutory once approved by the minister responsible for the administration of the Physical Planning Act (No. 88 of 1967), the management plan prepared by an interim management committee would not be statutory. Findings and recommendations would need to be presented to the Minister of Environmental Affairs and the Office of the Prime Minister and included into the final Guide Plan for the Cape Metropolitan area.

The diagram overleaf illustrates the flow of responsibilities and influence of the proposed interim management committee.

8.2 A LONG-TERM APPROACH

Despite the major advantage of the short-term approach outlined above - namely the development of a detailed management plan for the specific area under focus - two

shortcomings would not be resolved. Firstly, the direct control of all activities in the coastal zone would remain diffused and although adherence to land use zoning would be assured, the management practices employed within these zones may prove incompatible with the ideals of integrated resource management. Secondly, the measure is ad hoc by nature and does not provide for the adoption of a uniform management goal for the adjoining coastal areas.

The following long-term proposal deals with an approach for the management of the total coastal zone, with a detailed outline of the administrative mechanism that could be employed in False Bay. This proposal has two stages of implementation.

8.2.1 The Enactment of National Coastal Legislation

The purpose of such legislation: To provide for the control and conservation of the coastline and to promote the integrated management of the coastal zone.

Definitions

(i) "coastline" would include the sea shore as defined in the Sea Shore Act 1935 (No. 21 of 1935), the Admiralty Reserve as defined in the Allocation of State Land Act 1961 (No. 48 of 1961) and all tidal water bodies including estuaries, coastal lakes, coastal swamps and wetlands.

(ii) "coastal zone" would include the coastline as defined in (i) up to a landward boundary of the watershed of the coastal plain or the 92 metre (300 foot) contour, whichever is adopted under the regulations of the minister.

The Act would comprise the following sections:

8.2.1.1 The control of the coastline

The Minister of Environment Affairs will be responsible for the control of the coast line. The Sea Shore Act 1935 (No. 21 of 1935) and the relevant sections of the Allocation of State Land Act (No. 48 of 1961) would be repealed. The Minister of Environment Affairs will assume the powers and responsibilities of the Minister of Community Development in as far as they relate to the sea-shore.

Control over all living organisms within the intertidal zone, between spring high water mark and spring low water level will be transferred to the Minister of Environment Affairs from the Minister of Agriculture and Fisheries. The Sea Fisheries Act 1973 (No. 58 of 1973) would need to be amended accordingly.

The Act would be administered by the Branch of Environmental Conservation of the Department of Environmental Affairs.

Implications of this enactment of legislation

1. The control of the coastline would be transferred to a single conservation-orientated authority.

2. The problems of multiplicity of responsibility in estuaries and other coastal water bodies would be eliminated.

3. All activities and developments that affect the coastline, such as harbour developments, boat ramps, angling, the provision of services and the erection of ocean outfalls would be directly controlled by or subject

to the consent of the Minister of Environment Affairs.

8.2.1.2 The promotion of the integrated management of the coastal zone

This would entail the co-ordination of planning and control of all activities within the above defined coastal zone by an advisory body constituted in terms of the proposed coastal zone management act. This co-ordination would be achieved through the adoption of a national coastal zone management policy by the various authorities involved in coastal zone management.

The advisory body would have to perform the following functions:

1. Formulate a broad policy for the management of the coastal zone.

2. Direct the Department of Environment Affairs in its control over the shoreline and other related responsibilities.

3. Direct research related to the coastal zone.

4. Make recommendations regarding the further management of the coastal zone.

In addition, provision would need to be made for the obligatory representation of such a body at the decision-taking or executive level of other state, provincial or local government agencies which function within the coastal zone.

8.2.1.3 The establishment of a Coastal Reserves Board

The final section of the proposed coastal zone management legislation would provide for the establishment of a Coastal Reserves Board. The purpose of the Board would be to acquire and manage coastal land and water reserves and sanctuaries. As in the case of the National Parks Board, this Board would be empowered to purchase land or acquire the control over certain stretches of the sea and sea-shore for the purpose of conservation and utilisation compatible with conservation.

The Lake Areas Development Board would provide the basis of such a Coastal Reserves Board and the powers and workings of the Coastal Reserves Board would closely resemble those of the currently constituted Lake Areas Development Board.

This Coastal Reserves Board would function at a national level, however, provision could be made in the enabling legislation, for the Board to financially, professionally and logistically support local or regional coastal reserves that are not deemed to warrant national status.

Attention will now be given to the second stage of implementation of the long-term management proposals as it relates to False Bay in particular.

8.2.2 The Administrative Mechanism Needed to Implement the Proposed Coastal Zone Management Act

The direct control of the shoreline would be the responsibility of the Department of Environment Affairs, through the Branch of Environmental Conservation. To ensure the effective execution of this responsibility, certain modifications would need to be made to the existing structure. A diagrammatic represention of the existing structure is shown below in Figure 8.2.

The major adjustments that need to be made are as follows:

1. Regional offices representing each functionally-based division of the Brnach must be established in at least three coastal regions, based in Cape Town, George or Port Elizabeth and Durban to cover the Western and South Western Cape, the Eastern and Southern Cape and Natal respectively.

2. An inspectorate and law enforcement contingent would need to be established in each regional office to deal with the inspection of delegated powers and permit authorisations issued in terms of the proposed act as well as enforcing regulations that are made with respect to the shoreline.

3. Each regional office would provide administrative and professional staff for the regionally based sub-committees of the national coastal zone advisory body.

The figures overleaf provide a diagrammatic representation of the current structure of the Branch of Environmental Conservation and the proposed Modified Structure.

The False Bay area would fall within the Western and South Western region that extends roughly between the Oranjemund and Cape Infanta. Initially one regional office, based in Cape Town would serve these two regions. A proposed composition of the regional office would include:

1. A deputy director: Regional representative of the Branch.

2. An assistant director:

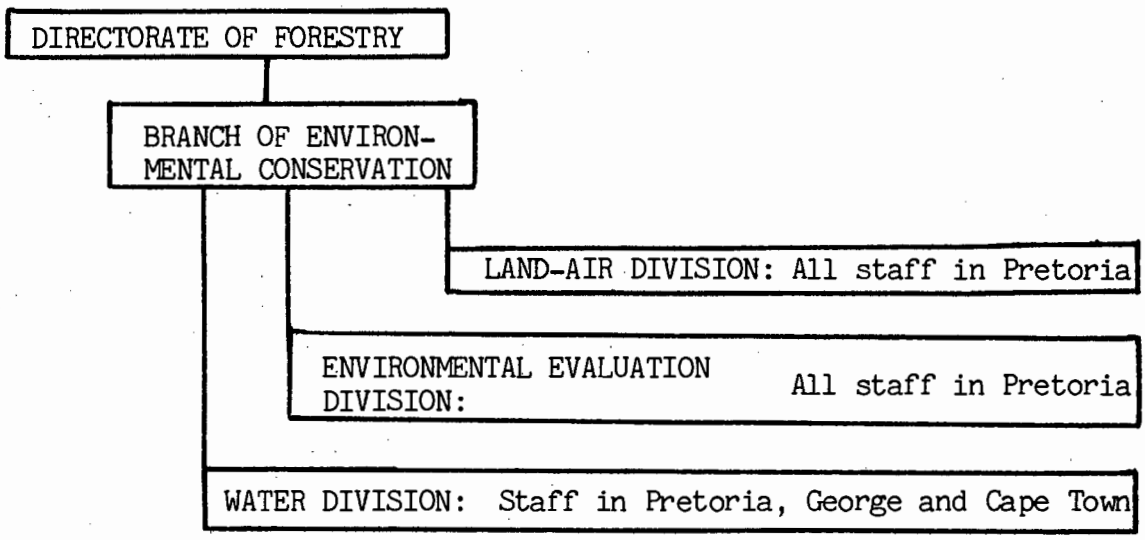

FIGURE 8.2: Current Structured Based on Functional Division of Respnsibility with no representation of other divisions, except for the water division, in Cape Town.

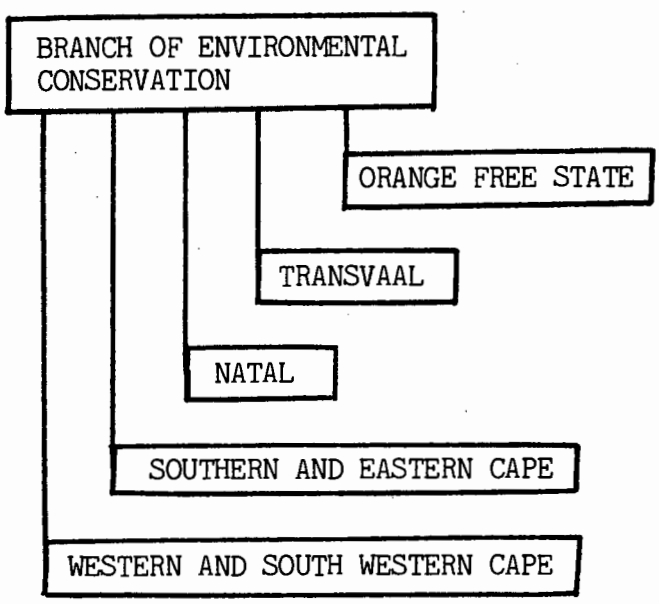

FIGURE 8.3: Proposed Structure Based on Geographical Division of Responsibility with all functions represented.

3. Three or more senior professional officers: These incumbents would need to be trained multidisciplinary resource planners.

4. At least one trained public relations officer to promote all aspects of environmental conservation awareness.

5. An inspectorate contingent of a minimum of eight law enforcement officers and inspectors. These officers would need a senior certificate plus a nature conservation or equivalent diploma.

6. Administrative staff including a senior administrative officer to be responsible for providing the secretariat for the regional sub-committees of the coastal zone advisory body.

The second part of the administrative mechanism is the composition and structure of the coastal zone advisory body and its regional subcommittees.

At a national level this body would act in an advisory capacity to both the Minister of Environment Affairs and the Minister respnosible for the Office of the Prime Minister. It is recommended that the currently constituted Subsidiary Committee for the Coastal Zone (one of the subsidiary committees of the Prime Minister's Planning Advisory Council) be adopted as the foundation of this coastal zone advisory body, subject to the following modifications:

1. This Committee must be made responsible to the Minister of Environment Affairs.

2. This Committee must meet quarterly or at least bi-annually rather than annually.

3. Regional sub-committees must be appointed to deal

with specific regions within the coastal zone. It is recommended that the geographical scope of these sub-committees coincide with the regional offices of the Branch of Environment Affairs.

4. Provision must be made for representation from private (non-governmental) organisations.

Special consideration should be paid to determining whether this advisory body could be constituted as a committee of the Council of the Environment yet to be established under the Environmental Conservation Bill - as this would avoid the establishment of yet another statutory body within the framework of government.

A diagrammatic representation of the national and regional committees is given below in Figure 8.4.

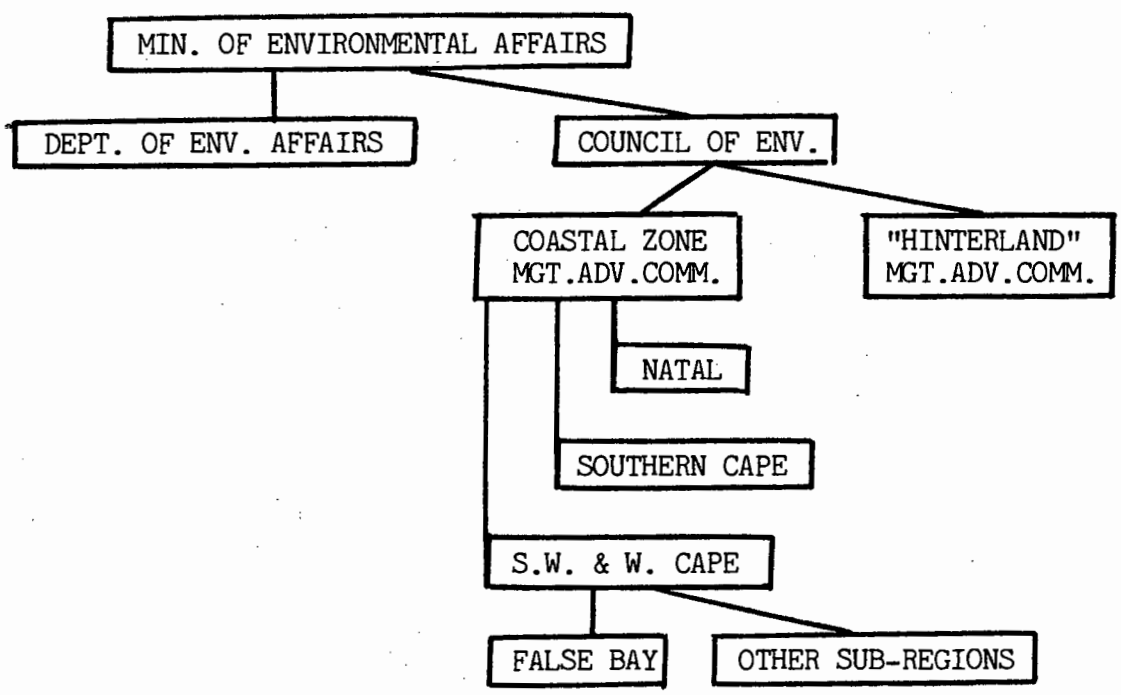

FIGURE 8.4: National and Regional Committees.

Each regional committee would need to form sub-regional committees, determined by catchments. The function of the regional committees and sub regional committees would be to:

1. Draft detailed management plans for the specific areas.

2. Advise the Department of Environment Affairs regional offices on matters relating to coastal zone management in general and shoreline control in particular.

3. Make recommendations regarding coastal zone research.

4. Provide the main committee with the necessary details required to determine a broad coastal zone policy.

For the False Bay sub-region, the composition of the advisory committee would be the same as the proposed interim management committee outlined in Section 8.1. The diagram overleaf provides a representation of the total coastal zone management institutional arrangement and indicates the flow of responsibilities and influences within that system.

The implementation of this long-term approach to formulating a suitable mechanism for the management of False Bay and other coastal areas should have the following results:

1. Direct control over the shoreline and tidal waters and wetlands will be transferred to a single conservationand resource management orientated state department.

2. Local authorities and provincial departments could still retain or acquire delegated powers from the new controlling authority.

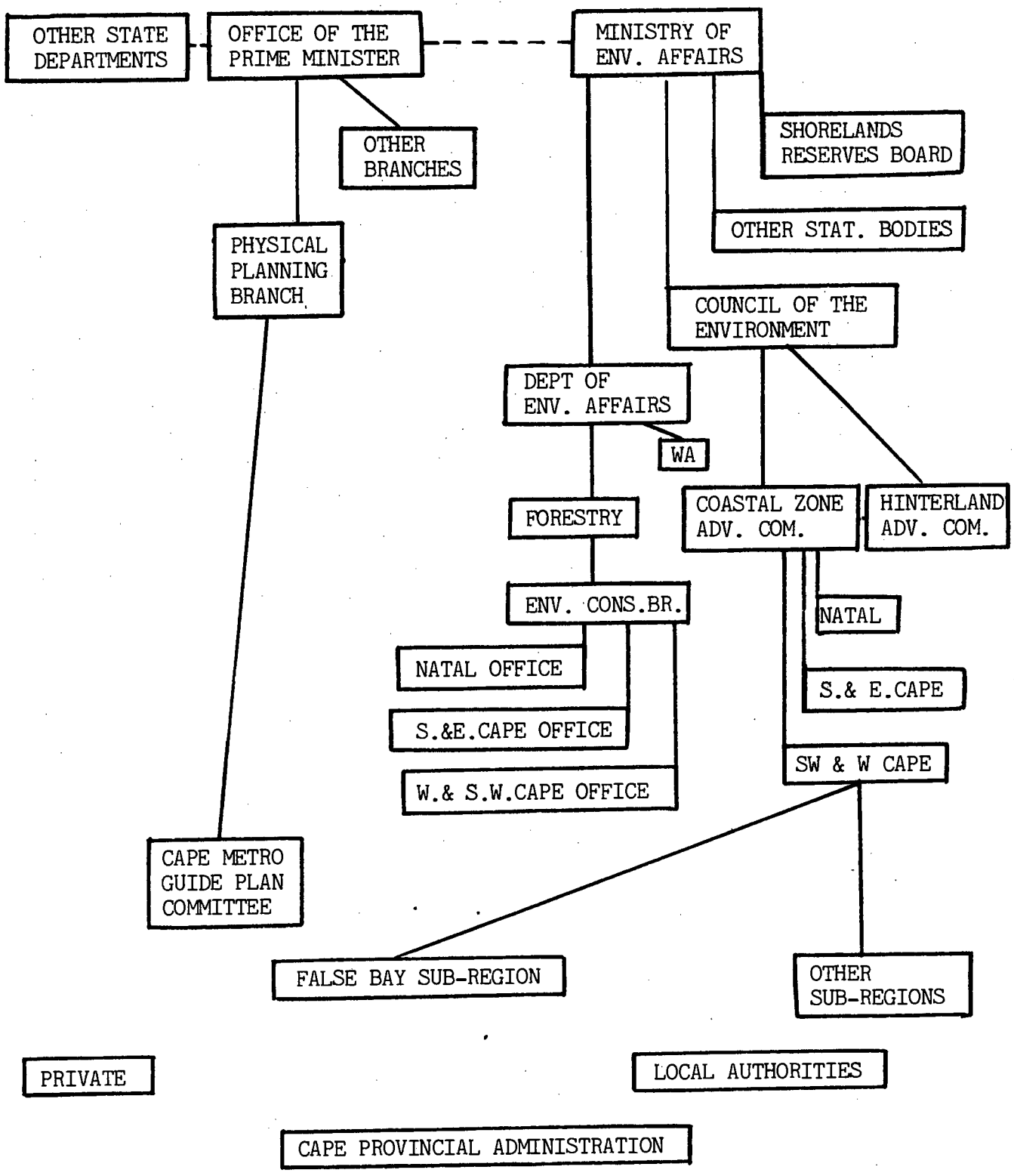

FIGURE 8.5: Coastal Zone Management Institutions.

3. Provision would be made for specialist planning of coastal zone utilization by an advisory body answerable to both the Ministry of Environment Affairs and the Office of the Prime Minister via intermediate channels.

4. Although broad policy for coastal zone management would be determined at a national level and embodied in statutes, devolved authority for detailed planning and control would remain the current management authorities.

5. The rationalisation of local authorities into a Metropolitan authority as in the case of the False Bay catchment area would facilitate the execution of management policy. However, this is unlikely to be adequate to substitute the local and regional advisory committees for coastal zone management, as these metropolitan or regional authorities would not have directly corresponding boundaries with the watershed adopted as the basic criterion for the coastal zone boundary.

6. Although the problem of multiplicity of authorities in the False Bay area would not be rectified by this long-term approach, the recommendations should promote a greater co-ordination of the management effort, assist with the clarification of management goals and offer a greater degree of protection to a most critical element in the coastal ecosystem - the shoreline.

An extract from the World Conservation Strategy, a document prepared by the International Union for Conservation of Nature and Natural Resources for the United Nations, provides an excellently apt conclusion to this paper. In a chapter dedicated to methods of improving governments' capacity to achieve sustainable development through the conservation of living resources, the strategy outlines

the following principles which should form the basis of organisation within government. These are:

"a. the different agencies with responsibilities for living resources should have clear mandates and such mandates should specifically include conservation;

b. there should be a permanent mechanism for joint consultation on and coordination of both the formulation and the implementation of policies;

c. such a mechanism can be achieved by giving new authority to existing agencies or by establishing new units in existing agencies; by setting up comprehensive agencies responsible for all living resources; or by setting up cabinet-level units to ensure that all sectors concerned carry out their conservation responsibilities;

d. each agency should be required by statute to disclose and explain its positions to the public;

e. policies and decisions should be implemented; sufficient financial and other resources should be provided to make this possible."[1]

Such advice can be easily offered, but seldom implemented without significant costs to one or more of the elements that uphold a differing status quo. In researching this paper, the author has been exposed to many of the real obstacles to achieving the integrated management goal outlined in the second chapter. Many of these obstacles

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1. International Union for Conservation of Nature and Natural Resources, World Conservation Strategy, Chapter 11.

have been identified and discussed and methods to overcome them are outlined in the recommendations.

It is the sincere hope of the author that this work may make some contribution in establishing a suitable administrative mechanism by which this, and other prime coastal areas can be best managed and conserved.

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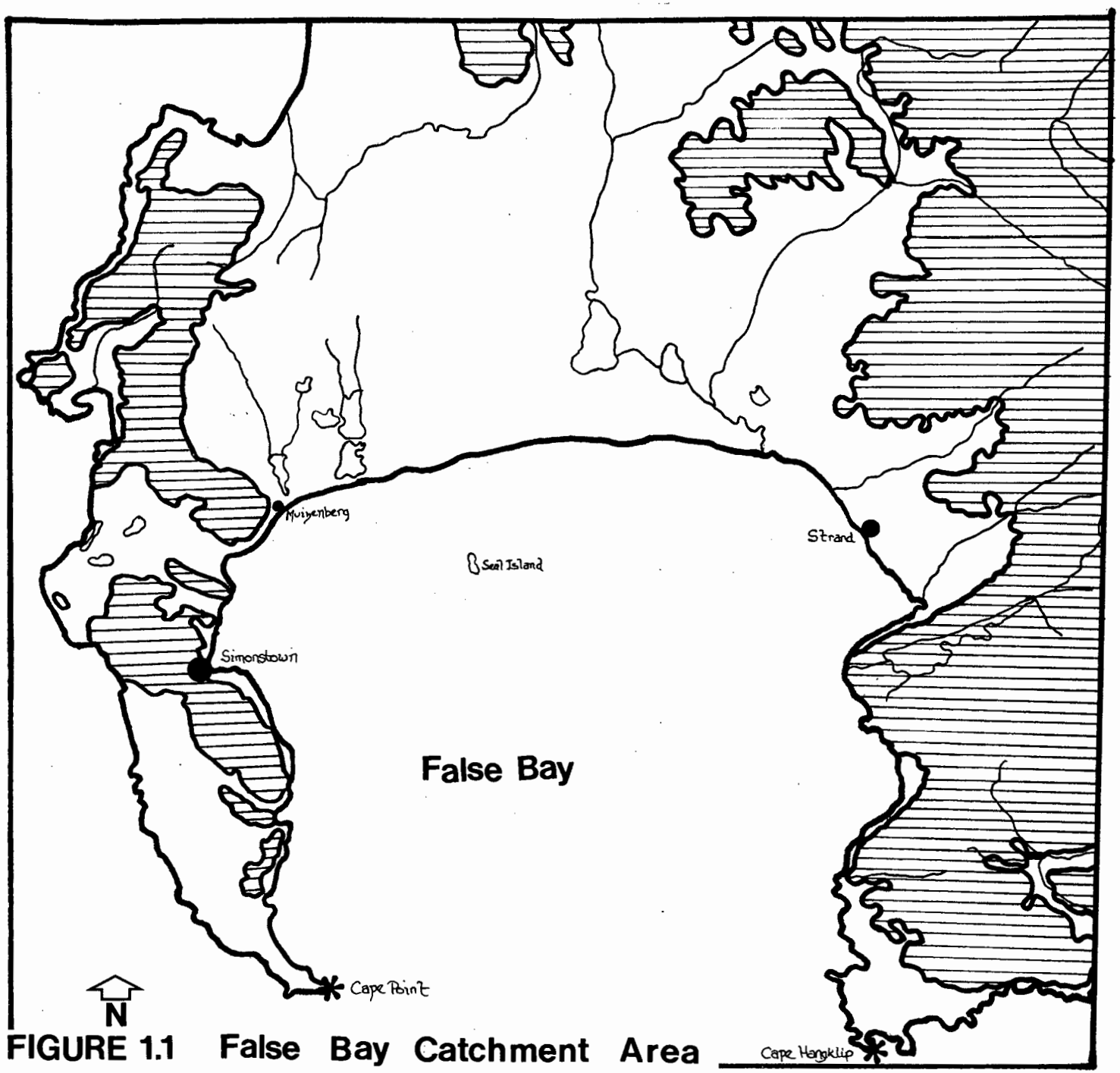
C. LEGISLATION

Various statutes, ordinances and by-laws of the Republic of South Africa.

APPENDICES

TABLE 1.1 Persons interviewed during research

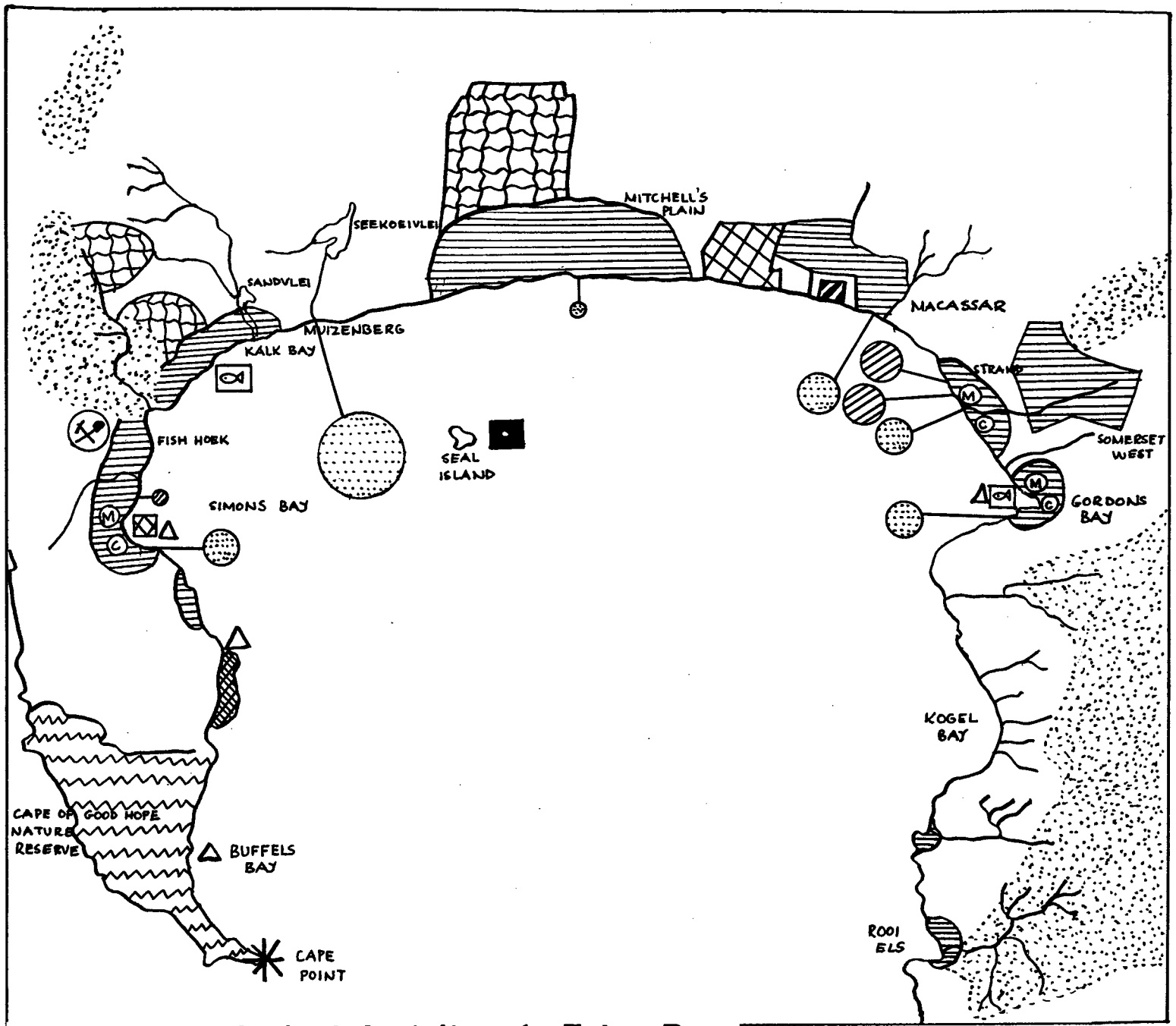
Dr. Bertie Van Zyl	Director Cape Metropolitan Planning Committee
Mr. Barrie Gasson	Urban and Regional Design Unit, UCT
Messrs. Guy Boddington and Bernhard Oberholzer	Urban Design Unit of the Municipality of Cape Town
Dr. Dave Pollock	Sea Fisheries Institute, Department of Agriculture and Fisheries
Mr. Neil Grant	Town Engineer, Simonstown Municipality
Mr. P.M. Hedderwick	Engineers Department, Fish Hoek Municipality
Mr. V.C. Garish	Assistant Director of Local Government, Cape Provincial Administration.
Mr. J. Robert	Director Captour
Mr. R. Stagman	National Tourist Bureau, Department of Tourism
Messrs. M. Callaghan and P. Tomalin	Planning Office, Divisional Council of the Cape
Mr. Gerald Wright	Chief Warden, Cape of Good Hope Nature Reserve
Mr. Howard Langley	Chief Warden, Rondevlei Bird Sanctuary



KEY

	Mountains
	Rivers

FIGURE 1.1 False Bay Catchment Area



KEY

	Sewage effluent
	Industrial effluent
	Mining operation
	Fishing harbours
	Launching ramps
	Sealing operations
	Defence
	Forestry area
	Residential
	Swartklip Sea Gull rookery
	Conservation area
	Agriculture
	Castle Rocks Marine Reserve
C	Commercial activities
M	Manufacturing activities

FIGURE 3.1 Principal Activities in False Bay

KEY

1	DEPARTMENT OF AGRICULTURE AND FISHERIES	4	DEPARTMENT OF ENVIRONMENT AFFAIRS
2	DEPARTMENT OF COMMUNITY DEVELOPMENT	5	DEPARTMENT OF TRANSPORT AFFAIRS
3	DEPARTMENT OF DEFENCE	6	DEPARTMENT OF MINERAL AND ENERGY AFFAIRS

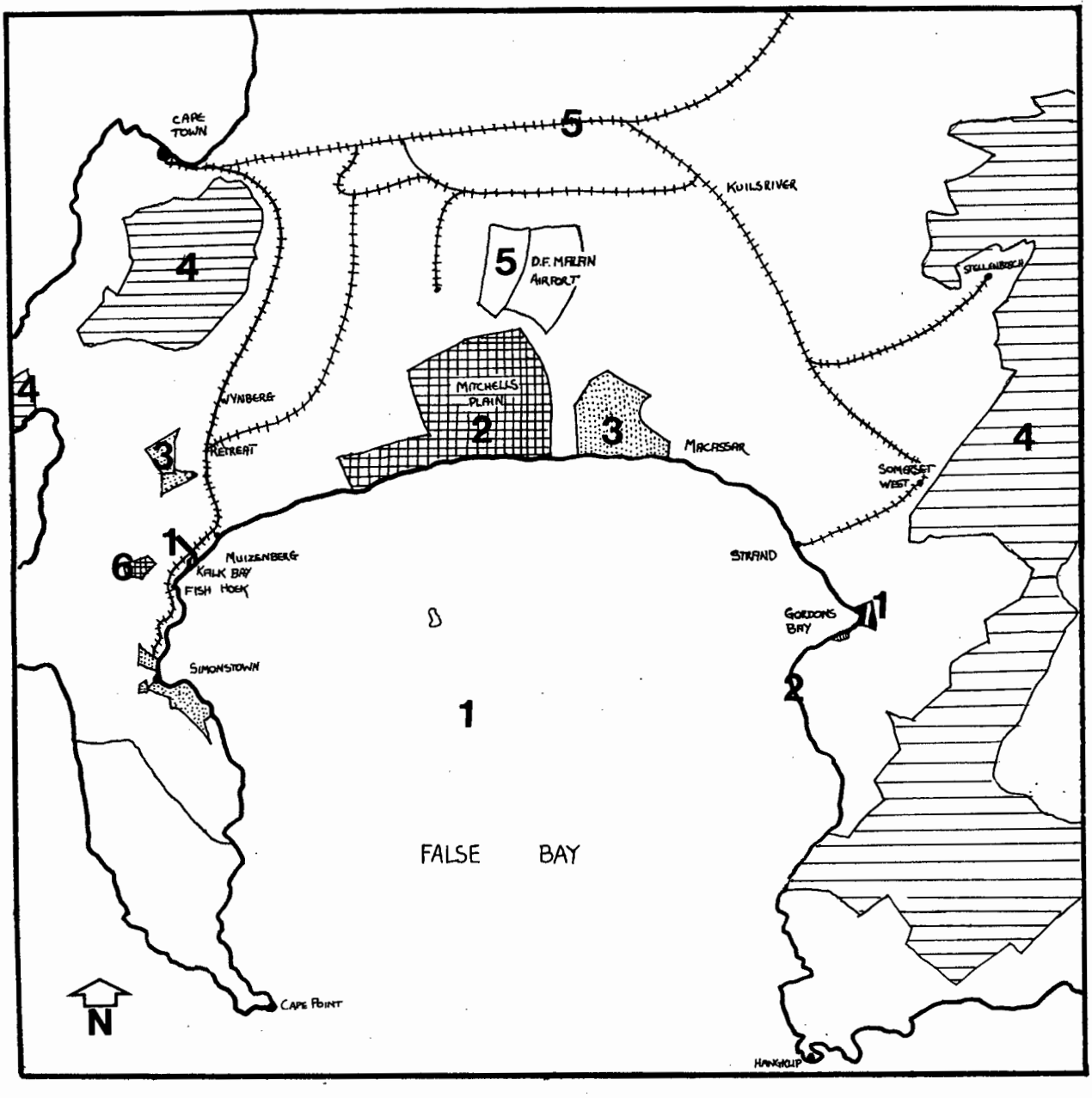


FIGURE 4.1 State and Provincial Jurisdictions

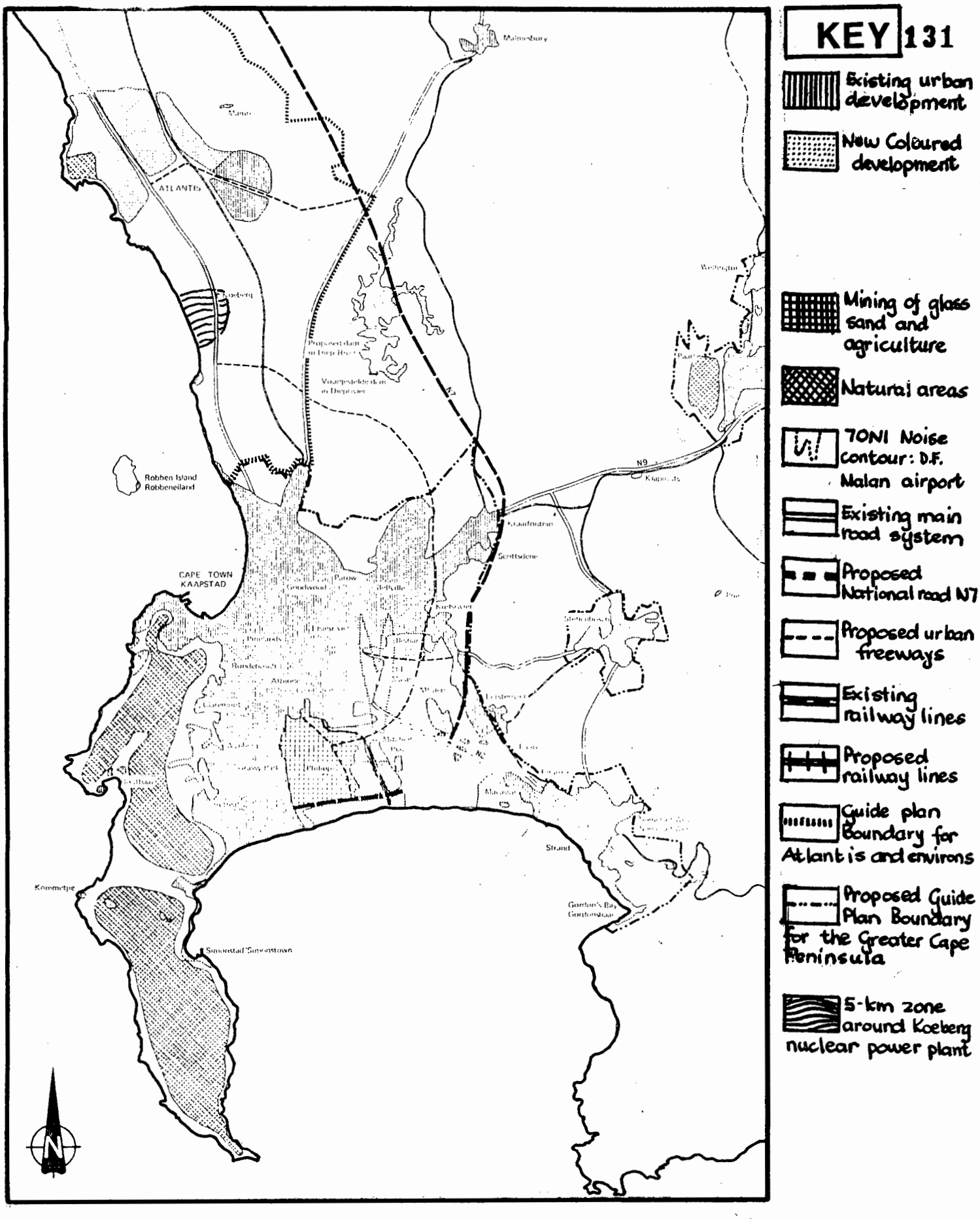


FIGURE 4.2 Spatial Development Strategy for the Western Cape

TABLE 4.1 Summary of Legislation affecting False Bay

Resource	Activity	Area	Controlling Body	Legislation
1. All land, minerals, water, means of generating power, labour and means of transport	The zoning for use and control over such resources	Any land contemplated in terms of Physical Planning Act No. 88 of 1967	Office of the Prime Minister or delegated authority	Physical Planning Act No. 88 of 1967.
2. State land, of which the State President is declared owner.	Alienation of rights in respect of and portions of, the sea shore and sea.	The sea, within the Territorial Waters of the Republic, up to the High Water Mark	Dept. of Community Development (Land Affairs Branch)	Sea Shore Act No. 21 of 1935
		Admiralty Reserve	As above	Allocation of State land Act No. 48 of 1961.
3. All living resources in the sea <u>including</u> sea weeds, shells and salt <u>excluding</u> seals and sea birds	Catching, removal, recovery, disturbance or injury	Fishing zone	3.1 Dept. of Agriculture and Fisheries (Sea Fisheries Institute)	(a) Sea Fisheries Act No. 58 of 1973 (b) Territorial Waters Act No. 87 of 1963
		Sea shore	3.2 Dept. of Agriculture and Fisheries	Sea Fisheries Act
			3.3 Dept. of Community Development (Land Affairs Branch)	Sea Shore Act Regulation
		Tidal lagoons and tidal river beds not declared a Lake Area in terms of Lake Areas Development Act, below High Water Mark.	Dept. of Agriculture and Fisheries	Sea Fisheries Act
4. Seals and Sea Birds	Disturbance, capture killing and trading	Fishing zone and Sea Shore	4.1 Dept. of Agriculture and Fisheries (Sea	Sea Birds and Seals Protection Act

Resource	Activity	Area	Controlling Body	Legislation
5. Certain Island and Rocks	Access to , disturbance of resources	Fishing zone and Sea Shore	5.1 Dept. of Agriculture and Fisheries	Sea Birds and Seals Protection Act No. 46 of 1973
			5.2 Dept. of Defence	Defence Act No. 44 of 1957
			5.3 S.A. Railways and Harbours Administration.	Railways and Harbours
6. Other natural resources in the sea including precious stones, metal or minerals and natural oil	Exploitation	Within the Continental Shelf	6.1 Dept. of Mineral and Energy Affairs	6.1 Territorial Waters Act (Section 7) in terms of Geneva Convention of Continental Shelf 1958
7. Sea, sea water and adjoining land	Construction and control of Ports and Harbours	Within area proclaimed a harbour or port	7.1 S.A. Railways and Harbours Administration	7.1.1 Railways and Harbours Control and Management Consolidation Act
				7.1.2 Harbour Construction Act No. 28 of 1972
				7.1.3 Saldanha Bay Harbour Construction Act No. 29 of 1973
	Construction and control of declared Fishing Harbour and Factories	Within area proclaimed a fishing harbour	7.2 Dept. of Agriculture and Fisheries	7.2.1 Sea Fisheries Act
			7.3 Fisheries Development Corporation of S.A. Ltd.	7.3.1 Fishing Industry Development Act No. 68 of 1978
	Construction and control of Naval Dockyards and Defence Reserves	Within area proclaimed Naval Dockyard/Defence Reserve	Dept. of Defence	7.4.1 Defence Act
	Transportation and Merchant Shipping		7.5 Dept. of Transport Affairs	7.5.1 Merchant Shipping Act No. 57 of 1951.
8. Sea, adjoining land and inland waters	Operation of fishing boat (as defined by Sea Fish Act)		8.1 Dept. of Agriculture and Fisheries	8.1.1 Sea Fisheries Act
			8.2 Fisheries Development Corporation of S.A. Ltd.	8.2.1 Fishing Industry Development Act

Resource	Activity	Area	Controlling Body	Legislation
	Operation of small craft not registered as fishing boats or commercial craft		8.3 Dept. of Community Development	8.3.1 Sea Shore Act
			8.4 Dept. of Defence	8.4.1 Defence Act
			8.5 Dept. of Agriculture and Fisheries	8.5.1 Sea Fisheries Act
			8.6 S.A. Railways and Harbour Administration	8.6.1 Railways and Harbours Control and Management (Consolidation Act)
			8.7 Dept. of Transport Affairs (Marine Branch)	8.7.1 Merchant Shipping Act
				8.7.2 Lifesaving Equipment Regulations 1968
				8.7.3 Collision and Distress Signals Regulations 1977
				8.7.4 Safety of Navigation Regulation 1968.
			8.8 Dept. of Environment Affairs (Directorate of Water Affairs)	8.8.1 Water Act No. 54 of 1956
			8.9 Province of the Cape of Good Hope	8.9.1 Ordinance 19 of 1974
			8.10 Local Authorities <u>including</u> Divisional Councils, city councils	8.10.1 Appropriate by-laws and delegated authority
9. Water, including sea water	Use of water for industrial purposes: pollution from the emission of effluents and sewage including solid waste		9.1 Dept. of Environment Affairs (Directorate of Water Affairs)	9.1.1 Water Act No. 54 of 1956
			9.2 Dept. of Agriculture and Fisheries (Sea Fisheries Institute)	9.2.1 Sea Fisheries Act
			9.3 Dept. of Health, Welfare and Pensions	9.3.1 Health Act 63 of 1977

Resource	Activity	Area	Controlling Body	Legislation
			9.4 Dept. of Community Development (Land Affairs)	9.4.1 Sea Shore Act - Regulations
			9.5 Provincial Department of Health: Cape of Good Hope	9.5.1 Health Ordinance
			9.6 Local Authorities	9.6.1 Appropriate by-laws.
10. Water including sea water	Use of water for mining operations		10.1 Dept. of Environment Affairs (Directorate of Water Affairs)	10.1.1 Water Act
			10.2 Dept. of Mineral and Energy Affairs	10.2.1 Mines and Works Act
				10.2.2 Mining Rights Act
				10.2.3 Precious Stones Act
			10.3 Dept. of Community Development (Land Affairs Branch)	10.3.1 Sea Shore Act
11. The Sea	Pollution of Sea by Oil from ships	Sea between High Water Mark and 200 nautical mile fishing zone	11.1 Dept. of Environment Affairs	11.1.1 Prevention and Combatting of Pollution of sea by Oil Act No. 67 of 1971
			11.2 Dept. of Transport Affairs	11.2.1 Merchant Shipping Act
12. The Sea	Pollution of Sea by Dumping of any substance		12.1 Dept. of Environment Affairs	12.1.1 Dumping at Sea Control Act 1980
			12.2 Dept. of Health, Welfare and Pensions	12.2.1 Hazardous Substances Act 15 of 1973
13. The Sea	Pollution of the sea by wrecks		13.1 Dept. of Transport Affairs	13.1.1 Merchant Shipping Act

Resource	Activity	Area	Controlling Body	Legislation
14. The Sea	Pollution through Ionizing Radiation		14.1 Atomic Energy Board	14.1.1 Atomic Energy Act No. 90 of 1967
				14.1.2 Nuclear Installations (Licensing and Security) Act No. 43 of 1963
			14.2 Dept. of Health, Welfare and Pensions	14.2.1 Hazardous Substances Act
15. The Sea	Pollution; detrimental to marine habitat and its resources		In addition to those bodies listed above:	
			15.1 Dept. of Nature and Environmental Conservation of the Province of Cape of Good Hope	15.1.1 Ordinance 19 of 1974
16. The Sea	Pollution of Harbours		16.1 Railways and Harbours Administration	16.1.1 Railways and Harbours control and Management Act
			16.2 Dept. of Agriculture and Fisheries (Sea Fisheries Institute)	16.2.1 Regulations in terms of Sea Fisheries Act
			16.3 Dept. of Health, Welfare and Pensions	16.3.1 International Health Regulations Act No. 28 of 1974
17. Estuaries All living resources	Catching, removal recovery disturbance or injury	All waters, not part of the sea including tidal rivers	Provincial Administration of the Cape	Ordinance 19 of 1974
18. All other waters including public and private waters	Conservation and any other use thereof	Except for provision made in Sections 12 and 21 of Water Act, sea water is not defined as "public water"	18.1 Dept. of Environment Affairs	18.1.1 Water Act

Resource	Activity	Area	Controlling Body	Legislation
IN ADDITION TO ABOVE				
19. All other waters including public and private waters	Use of water for mining purposes		19.1 Dept. of Minerals and Energy	(1) Mines and Works Act (2) Mining Rights Act (3) Precious Stones Act
20. All other waters including public and private waters	Conservation and any other use thereof	Proclaimed State Forest	20.1 Dept. of Environment Affairs	20.1.1 Forest Act No. 72 of 1968
		Proclaimed Mountain Catchment Area	20.1 Dept. of Environment Affairs	20.2.1 Mountain Catchment Areas Act No. 63 of 1970
		Proclaimed Provincial Nature Reserve	20.3 Provincial Administrations of the Cape and Natal	20.3.1 Ordinance 19 of 1974

TABLE 4.2 Nature Reserves

1. Table Mountain Nature Reserve - Cape Town Municipality.
2. Silvermine Nature Reserve - Cape Town Municipality.
3. Cape of Good Hope Nature Reserve - Cape Divisional Council
4. Durbanville Nature Reserve - Durbanville Municipality
5. Tygerberg - Bellville Municipality
6. Paarl Mountian Nature Reserve - Paarl Municipality
7. Jan Marais - Stellebosch Municipality
8. Rondebosch Common - City Council
9. Bracken Nature Reserve - Brackenfell Municipality
10. Edith Stephens Nature Reserve - National Botanical Gardens
11. Cape Flats Nature Reserve - University of Western Cape
12. Rondevlei Bird Sanctuary - Cape Divisional Council
13. Zandvlei Bird Park - Municipality of Cape Town
14. Helderberg Nature Reserve - Somerset West Municipality
15. Caledon Nature Reserve - Caledon Municipality
16. Salmonsdam Nature Reserve - Caledon Divisional Council

TABLE 4.3 Need and Desirability Criteria

Need should be assessed in relation to:

1. The development of neighbouring resorts, particularly if they display similar characteristics;

2. The standard of existing and proposed road linkages;

3. Distances to major centres and related population densities; all of which play a significant part in determining the overall popularity of a resort.

Desirability should be assessed in relation to:

Many factors govern the extent, nature and suitability of recreational sites. These include -

1. a variety of natural amenities, their accessibility, extent and quality;
2. slope, aspect and views;
3. climate and length of season;
4. fresh water availability;
5. environmental quality and
6. unique characteristics ofthe site and in the vicinity;

In order to facilitate initial constraints and final design the following process for the establishment of need and desirability should be adopted:

1. Prove water availability or feasibility of rain water tanks;

2. Evaluate extent of natural amenities and establish size of population which can be catered for. This must be related to the quality of that amenity, e.g. safe bathing, fishing, depth of boating waters, etc.;

Table 4.3 continued

3. Evaluate the environment to determine population capacity, and the nature of the design required to optimise the use of the natural environment.
4. Evaluate all natural reosurce base elements for optimum preservation, conservation and resource management.
5. Assess the required balanced holiday resort space allocation.
6. In terms of (5) assess economic feasibility of establishment of holiday resort and create a phase program.
7. Conduct detail design under guidance of ecologist, landscape architect and provincial planner.

Source: Cape Coastal Survey, 1973.

TABLE 4.4 Environmental Degradation of False Bay

PERCEIVED DEGRADATION	APPARENT PRINCIPAL CAUSES
1. Depletion of marine stocks	Inadequate control over both commercial and recreational exploitation.
2. Destruction of inter-tidal zone	Inadequate control over bait and shell fish collection; disruption of dunes and coastal vegetation
3. Pollution of the sea	Excessive permitted effluent discharge
4. Pollution of the vleis, estuaries and rivers	Multiplicity of authority and legislative control; unregulated diffuse pollution sources
5. Depletion of fresh water resources	Manipulation of natural run off patterns and aquifer recharging
6. Destruction of natural flora - particularly "fynbos"	Unregulated fires; inappropriate development through insensitive planning; the spread of invasive alien species; inappropriate utilisation of reserve at Cape Point
7. Deterioration of quality of social environment	Congested mass housing schemes; rash of informal (squatter) housing
8. Reduction of natural aesthetic appeal	Operation of offensive/noxious industries such as Kaolin mines, AECI factory and Marine Oil Refinery; insensitive housing developments
9. Destruction of endemic fauna	Enforced destruction of "problem" animals such as the Chacma baboon and lynx; destruction of natural habitats.

DEFINITION OF A NATURE AREA

(xiv) "natural area" means an area that could be utilized in the interests of and for the benefit and enjoyment of the public in general and for the reproduction, protection or preservation of wild animal life, wild vegetation or objects of geological, ethnological, historical or other scientific interest;

SECTION 4(b) PHYSICAL PLANNING ACT NO. 88 OF 1967

As from the date of the relevant notice issued in terms of subsection (1), no person shall, except under the authority of a permit, use any land specified in the notice for any purpose other than the particular purpose specified in the notice or the purpose for which it was being used at that date.

Establishment of management committees in respect of nature areas

9. (1) In respect of any nature area a committee, to be known as a management committee, may be appointed by the Minister to advise him on the management and development of such nature area.

(2) The number of members of any management committee shall be determined by the Minister.

(3) The members of a management committee shall be appointed by the Minister and shall consist of persons who—

(a) in his opinion are representative of—

(i) the Department and any other Government department of State which in the opinion of the Minister should be represented on such committee;

(ii) each provincial administration concerned;

(iii) each local authority whose area of jurisdiction falls wholly or partly within the nature area concerned;

(iv) the owners of land in such nature area; and

(v) a recognised body of users of such nature area; and

(b) in the opinion of the Minister are capable of assisting such committee in the discharge of its functions.

(4) One of the members of a management committee shall be designated by the Minister as chairman and another as deputy chairman for such period as the Minister may determine.

(5) A member of a management committee shall hold office for such period as may be determined by the Minister at the time of the appointment of such member, but shall be eligible for re-appointment: Provided that, if in the opinion of the Minister there are good reasons for doing so, he may at any time remove any member from office.

(6) The administrative work connected with the performance of the functions of any management committee shall, subject to the directions of the chairman of such management committee or any other member of such committee designated by such committee for that purpose, be carried out by officers and employees of

(7) Any member of a management committee who is not in the full-time employ of either the State or a local authority shall, in respect of his services as a member of a management committee, receive, out of moneys appropriated by Parliament for that purpose, such remuneration and allowances as the Minister, with the concurrence of the Minister of Finance, may determine either in general or in any particular case.

(8) If any recommendation by a management committee to the Minister is not acceptable to any member or members of such committee, such member or members may, within a period of 60 days of the making of such recommendation by such committee, submit to the Minister his or their proposal on the matter concerned.

Directions with regard to management and development of nature areas

10. (1) The Minister may, by notice in the *Gazette*, issue directions with regard to the management and development of land situated within any nature area.

(2) Every owner or occupier of land situated within a nature area in respect of which directions have been issued in terms of subsection (1), and the successors in title of such owner or occupier, shall be bound by the provisions of such directions.

(3) The Minister may, in writing, direct the registrar of deeds of the registry at which the deeds of transfer of land referred to in subsection (2) have been registered to cause such directions, free of charge, to be noted in his registers and to be endorsed on the office copies of the respective deeds of transfer.

(4) Any person referred to in subsection (2) who contravenes any provision of a direction or refuses or fails to comply therewith shall be guilty of an offence and liable on conviction to a fine not exceeding R1 000 or to imprisonment for a period not exceeding two years or to both such fine and such imprisonment.